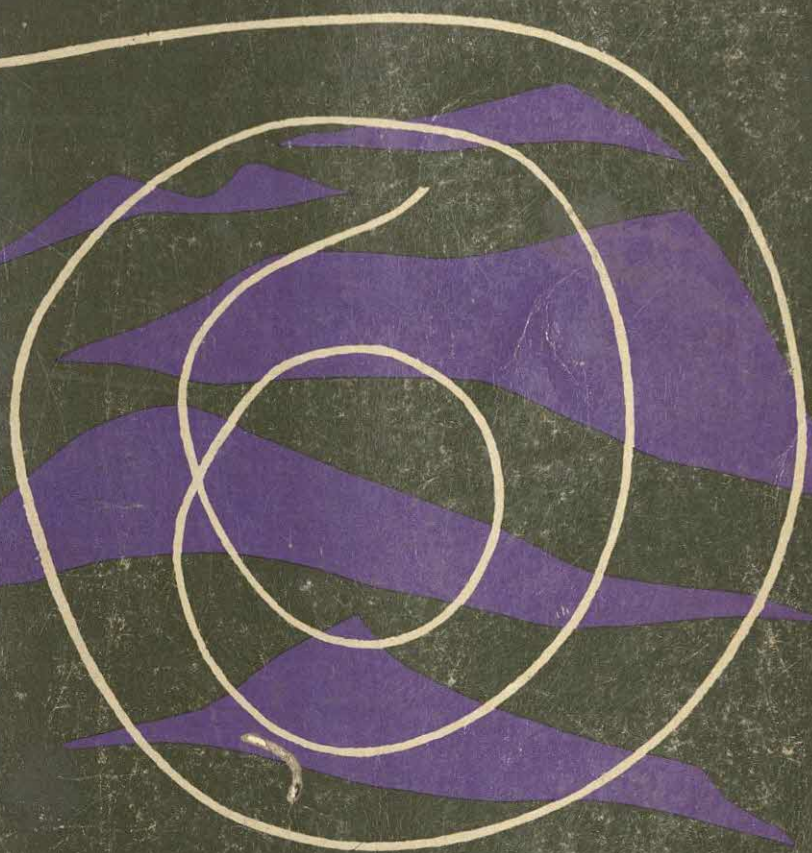


EDUCATION and the DEVELOPMENT of NATIONS



Editors • JOHN W. HANSON and COLE S. BREMBECK

Education
and the Development
of Nations

Edited by

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Preface



This book deals with the capacity of education to assist in the development of nations and to bring about desirable social change. It examines education as an agent of social, economic, and political development. It describes the kind of functional education that is required if development and constructive change are to take place. Conversely, it analyzes how dysfunctional education impedes modernization.

The thesis of the book is that education is one of the universals in the development of individuals and nations. Understanding its developmental role is not an optional matter. It is required if education is to achieve its great expectations. And this is particularly true for education in the developing world today.

This volume includes forty-seven essays selected from a wide range of social science literature and bridged by editorial introductions. In addition, the editors have provided a selected reading list at the end of each chapter. The essays address eight main themes by which the book is organized into parts. We would like briefly to describe the substance of these eight parts.

Part One deals with the developing world's challenge to education. Never have nations expected more of education. Specifically, *what* do they expect of education? From what social context do these expectations spring? These are the questions to which the selections in Part One are directed. Part Two concerns the human predicament that results from rapid social change and the use of education to accelerate it. Does increased education increase the pursuit of happiness? Or does it reduce it? Part Two suggests the conditions that education must meet if it is to improve rather than diminish the human condition. Part Three discusses education and economic development. The contributors to this part do not regard education as *the* answer to economic development. They do express a cautious optimism about education's power for economic growth, if it is wisely

conceived and properly applied. Part Four turns from economic to cultural and scientific development. The selections of this part argue that economic development can flourish best when nourished by cultural and scientific development. The development of whole nations must accompany the development of whole economies.

Part Five shifts from the positive educational factors that facilitate social development to negative factors that impede it. Do traditional schools impede change? How do social barriers retard needed educational reform? The selections in Part Five subject dysfunctional education to social analysis. Part Six deals with a topic of crucial and widespread concern: educational planning. What is educational planning? How are educational plans developed? What issues confront educational planners? The nine essays of Part Six focus on these questions. Part Seven shifts to the field of technical assistance in education. What are the important questions for the giver of educational aid? The receiver? How does external aid fit into a country's educational plan? What are the American university contributions to education in the developing nations?

In Part Eight we turn to the future, and particularly to the research that is needed if we are to come closer to finding answers to the urgent questions posed in this volume. A case study of such research in action and a list of research priorities are presented. We close this section, and the volume, with a chapter that looks forward to a more adequate theory of education for development.

What are the appropriate uses for this volume? In what kinds of courses will it be useful as a text or reference work? Beyond the classroom, what does it offer the person with professional interests in the role of education in development and social change?

For classroom use the editors have selected these essays with several specific possibilities in mind. First, for the courses in the social foundations of education this book will provide useful supplementary material. These courses are usually concerned with particular social problems in education. For example, education as a factor in social change, social and cultural influences in education, the school and community, social class aspects of education, and international education are a few of the topics of common concern. The selections here bring fresh insights to these and other topics from across different nations and cultures.

Comparative education courses benefit from a variety of materials drawn from contrasting cultural milieus. The editors have dipped generously into non-Western materials to help right the usual imbalance in favor of Western points of view. Comparative education courses will be enriched by a range of new considerations and viewpoints found in these selections.

Instructors dealing with crucial issues in education will find here a compendium of educational concerns in a cross-cultural context. Further, these issues are probed from the orientations of several disciplines, thereby suggesting new perspectives on persistent and significant issues in education.

In particular, this volume is designed as a basic text for the growing number of new courses dealing with the role of education in the underdeveloped world.

Further we believe that these selections can contribute much to those courses focusing on the development process, whether it be from the viewpoint of economics, political science, sociology, or agriculture. In each of these areas the role of education and training in development becomes a relevant consideration. The teacher of development in any of these disciplines will find here selections by able authors capable of stimulating able students.

Finally, to the general professional reader in the area of development this volume brings together a select group of readings screened from a large body of social science literature directed at the eight concerns listed above. Although space limitations do not permit inclusion of selections touching all outposts of the growing frontier of development education, we believe the eight main topics included here are representative and that these are well covered by the editors' selections.

Thus, this book may be used as a basic or supplementary text, for courses in comparative or international education and for emergent courses on education in developing nations. For those who use the volume as a text the editors suggest that the sequence of the eight parts can provide a suitable organization for a course. But the arrangement is flexible enough and the parts self-sufficient enough that some may be deleted or rearranged to suit the needs of a particular course. The selected readings at the end of each chapter also make the book a useful professional reference for the scholar or advanced student.

Although this book has been compiled by educators, and in large part reflects their experience in overseas developmental projects, the selections, in harmony with the view above, reflect the total spectrum of fields that help render educational decisions effective. Included are relevant analyses by economists, political scientists, anthropologists, sociologists, educators, and public officials who have devoted their attention either specifically to education or to the social forces and problems with which education must come to terms if it is to play its part in helping emerging nations become modern. Thus, although the volume is in no sense a how-to-do-it manual for those presently or prospectively involved with overseas education, it is intended to be a highly *practical* volume in the sense of helping them more adequately recognize and define the problems with which they must deal. In this way it should render particularly useful service, as either text or source book, for a wide variety of courses and training programs that are concerned with education in the developing nations, regardless of whether these courses fall under the rubric of Education or under that of one or more of the related disciplines now playing such a crucial role in reshaping educational plans and progress overseas.

Today education is the single biggest enterprise in developing countries. It employs more people and influences directly the lives of more people than any other organization apart from government itself. The expenditures on education are huge in relation to other governmental and private expenditures. The flow of foreign aid to education is exceeded only by the flow for military purposes. And yet education is not big enough, or at least is not effective enough. The human potential for making it effective is there. But human aspirations and human potentials alone are not sufficient. These can only be harnessed through the application of intelligence and the fullest application of knowledge about ways of developing and using these potentials, which we have accumulated. On this knowledge and its application depends the answer to the crucial question: Will education realize its high hopes and optimally fulfill its potential for development?

No single volume can pretend to compile all this knowledge, to point to all the factors and forces that determine how effective a tool education is in social and economic reconstruction. But serious

study of the emerging nations, and the experience of those concerned with education in these nations, is accumulating. From this study and this experience the dimensions of the problems involved in using education for modernization are becoming clearer. The literature of development is large. From this increasingly rich store the editors have focused upon themes that are of impelling urgency. We believe we have done this in such a way as to present both the excitement and the difficulty of the adventure upon which new and inexperienced nations are embarked.

We express deep appreciation to that host of colleagues and associates, here and abroad, with whom it has been our privilege to carry on a continuing dialogue on the subject of education and development. Nameless though they be here, their contribution is specific and concrete. Especially we wish to thank our research associates, Betty Anderson and Raghu Singh, for their diligent searching and checking, and our typists, Barbara Huby and Lois Hosley, for the extra hours required to meet the deadline. We absolve all in whose debt we are of responsibility for errors, substantive or technical, and only pray that they are few and minor.

J.W.H.
C.S.B.

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introduction

The Study of Education for Development

The Persian water wheel is a common sight on the Punjab plain of West Pakistan, along the course of the Indus River as it descends from the snowfields of the high Himalayas down to the Arabian Sea. One of the oldest mechanical devices used to draw water, the Persian wheel is powered by blindfolded oxen, yoked to a shaft. As the oxen trudge in a circle around the horizontal wheel, the shaft turns a vertical wheel at the side of the well, its buckets are lowered on long chains, hauled up, and emptied into ditches that carry the water to the cultivated plain. The oxen are commonly driven by little boys, who sit, stick in hand, behind the plodding beasts and prod them in their tedious rounds.

Touring the plain with a government officer, I spoke with one such boy who was eager to try out the English he had learned in school. Halting his oxen, he told us that he lived in the nearby village and that his father owned the land he was watering. He was, he said, "reading" in the fifth class; he wanted to go on to the middle school and then to the secondary school.

"And what then?" we asked.

"I want to get a clerk's job in a government office in town," he answered.

"Why not be a farmer like your father, live in the village, and stay among your family and people you know?"

"I will keep my home in the village with my family," he said. "But educated boys do not till the soil, and, besides, my family needs the money I will earn in the town. We can all have a better house then."

That evening, after a hard day's work in the hot and sunny fields, the farmers gathered in the village courtyard to relax and talk, in the fashion of rural people everywhere. The talk turned to the children's education.

I found it difficult to believe what I heard there, but I have since come to recognize it as a constituent of the whole "revolution of rising expectations." The people of this remote village—its one road navigable only by jeep, its inhabitants unreached by newspaper or radio (for few could read, and the one radio sent earlier by foreign aid had been broken) and miles from any center of learning—regarded education as their great hope.

"But why is education so important to you, when you have so many other needs?" I asked; the village had no plumbing or electricity.

Rising from the ground where he squatted with his neighbors, one elder replied for the group: "Sir, without an education, how can our children escape our fate?"

Proudly, one villager after another told us of sons who had gone to school and on to success in town or city. "They come back to our village and tell us many things." "They keep houses here."

Not all the villagers approved of education, however; minority reports arose. One landless villager said, "I need my sons to work. If we do not work, we cannot eat." Another complained, "If my son is educated, he will no longer work with his hands. I do not trust men who are too good to work with their hands." A third worried about the consequences of exclusively secular education: "I send my sons to the mosque school where they learn the Holy Koran, but in the government school they learn only to be godless."

About the education of girls, feelings were mixed. The village school for girls had but sixteen pupils, scarcely a third of all the girls eligible to attend. Most villagers approved, some for social and economic reasons: "Educated boys these days are demanding educated girls for wives. You can arrange a better match for an educated daughter." "An educated girl can get a better job."

Some dissented. One young man who lacked formal schooling himself had strong reservations about marrying an educated girl. "Wives know enough now," he said. Another contended

that education would make women unfit for their proper duties as homemakers and mothers. Such voices, however, were in the minority.

Returning to the jeep that night with my host, the district government officer for the area, I asked, "How do you explain all this?"

"I'm not sure," he said. "But I do know that, as I go from one village to another, I find the villagers more united on education than on anything else. A new school is the only thing they'll dig down into their pockets for. Almost nothing else."

Later, as I reflected on what I had seen and heard, the significance of the impression taking shape in my mind became clearer. A new faith—new, at any rate, to the villagers—was taking root in them—a faith in education as a means of improving man's lot. This belief in education and in the schools foreshadowed changes of which the villagers could not yet conceive; it was the beginning of a process that, slowly but inexorably, would alter their entire way of life. In sending their children to school, they expressed and testified to the belief that it is possible for man to change his destiny and to create for himself a new and better life, if not an ideal one. This belief, one of the great forces in the development of Western civilization, has come to symbolize one of the great revolutions of our time—a revolution that is spreading to nomads on the plains of Afghanistan, to palm-cutters in the sweltering rain forests of Africa and South America, to tillers of crude plots more appropriately measured in yards than in acres, to the inhabitants of the corrugated shanties that line the open sewers of preindustrial cities throughout the subtropical world.

To be sure, for such people the new faith finds its expression in terms of shelter and sustenance in a meager economy, not in the abstractions of philosophers or the visions of seers. For all its humble beginnings, however, the faith in education that is growing among undeveloped peoples springs from a belief that is basic to the attainment of a better life: Whenever men put their trust in schools and in the knowledge schools impart, they are placing their faith in themselves and in what they may ultimately accomplish for themselves. This aspect of the new revolution, however humble its goals and however uncertain their realization may be, cannot fail to impress the educator. The

power of faith in education, far more than the power of the atom, is the truly great moving force that modern man is releasing everywhere, in countless ways. It is just that force, found in a Punjab village and multiplied in thousands of its counterparts across Asia, Africa, and Latin America, that this book is about. It concerns the crucial role of education in the drive to improve one's lot, to strengthen one's society and nation, to catch up with an age of science and technology, to "escape" old and unsatisfying fates.

THE FOCUS OF EDUCATION FOR DEVELOPMENT

This book attempts to describe the range of considerations that the study of education for the development of nations must encompass. The selections deal exclusively with portions of the world that are not sufficiently developed to be called "modern." Because the study of education from the standpoint of national development is relatively undeveloped itself, this book does not present final answers to the questions it raises; rather, it attempts to indicate what progress educators have made toward understanding a complicated process.

In examining the role of education in national development, several points should be emphasized. The first of these is that much relevant knowledge has yet to be gathered. If we are to find out what we need to know about the place of education in the development process, we must learn first to ask the right questions. Too often, simple but inappropriate "solutions" to the problems of development have been seized upon because the significant questions were not raised. Simply expanding education, for example, was once thought to be the answer to development problems; we now know that far more is involved. The quality, as well as the quantity of education, makes the difference. We know too that education for national development demands much more than merely training for specific vocational skills—another simple "solution." Conclusions like these result from failure to recognize the breadth and depth of the problem. This volume seeks to help define that problem by directing attention to relevant considerations and by raising many of the questions that need to be asked about it.

The range of the questions that we are only now beginning to learn about is broad indeed. Those who work in develop-

mental education are by now familiar with many of them: How can we determine which levels of education should be emphasized at various levels of development? How can we make it practicable to keep youngsters in school long enough to assure an economic return on the educational investment? How can we estimate realistically the manpower needs that will guide sound educational expansion? But many other questions that suggest the breadth of scope that study of education for development must eventually attain are not often clearly recognized. How, for example, can emerging nations retain in their educational programs what is fine in their inheritance even as they redirect those programs toward modernization? How can the ancient heritage of nations committed to radically new destinies be integrated with modern educational systems? What qualities of mind and character enable people to play effective roles in a changing society, and how can education foster these qualities in rising generations? How can education help minds to leapfrog the centuries of Western development in the span of a few years? How can we educate to assure social change but avoid the tragic social casualties of our own rise to modernity? As we formulate such questions as these, we begin to see that more than economics is involved in developing a science of education for social change.

The second point we wish to raise, however, is that we have to some extent progressed beyond the point of raising questions about the place of education in the development process. Much of our knowledge about education for developed nations is applicable to emerging peoples as well. As Tai Solarin, a citizen of Nigeria has remarked about education in his land, "There are some things that have already been learned, and we need not again go through the arduous process of discovery." Not only do we possess an accumulation of facts, but we know also some of the cautions that must be observed in applying to one culture knowledge that is based on experience in another culture. We know, for example, that in education as in other social sciences the general principles are cross-culturally valid more frequently than their specific applications are. We know also that the educational process does and must vary with the culture. Educational planners and practitioners who understand the cultural nature of education do not fall into the trap of thinking that

the educational processes developed in one particular culture constitute the only *true* education. Nothing about the content, methodology, or organization of education is sacred. Those aspects can be, always have been, and must continue to be shaped to serve the ends of the particular society to which they are applied. Sometimes, educational borrowing overlooks this flexibility of means. This volume seeks to indicate ways in which existing educational knowledge and practices have been both well and poorly translated from one culture to another.

Much of the knowledge that is relevant to using education as a means toward modernization must come from fields other than that of education *per se*. Increasingly, the educator must look to the economist, the political scientist, the anthropologist, and the social psychologist for knowledge requisite to the determination of informed educational decisions and sound educational programs. Although, for example, it may not be the educator's job to determine the allocation of meager resources to schools as opposed to, say, roads or factories, it is his responsibility both to make clear the requirements of education and, once resources have been allocated, to develop sound educational programs that will help achieve national goals. In so doing, the educator will find the contributions of other social scientists indispensable, but, at the same time, he must recognize that the difficult task of translating their knowledge and insights into viable educational programs is his, not theirs. Another aim of this volume, then, is to suggest ways in which educators can use knowledge from related fields in performing a task that is uniquely theirs—that depends upon educational, not economic or political, statesmanship.

The third point we wish to emphasize is that the process of educational reconstruction is inevitably concerned with values. To speak of education for development is to imply that we have some conception of a better life for people. Thus, though scientific principles derived from empirical data are both useful and necessary in planning educational programs, such principles alone cannot suffice. The hierarchy of goals and values educational planners hope to realize influences programs and processes as much as do the findings of science.

In this volume, we are concerned with education in societies

that hope, first of all, to be both *modern* and *free*.^{*} These goals have not been imposed upon the nations discussed in this book, nor should they be. Rather, country after country has stated them as its own, has incorporated freedom into its fundamental laws, and has endorsed international declarations supporting liberty. Even when peoples have surrendered one goal or the other to expediency, they have regarded the surrender as temporary, as a means to a developmental end in which both freedom and modernization would be assured. Increasingly, a third goal has been articulated—that of human dignity, of the right to self-respect and opportunity for self-development of men once led to consider themselves inferior or unworthy. These three goals—modernity, freedom, and human dignity—provide the context within which this book treats education for development.

The selections in this volume thus reflect the nature of educational science as a way of *looking at* aims, data, and problems, a way of examining the knowledge we are acquiring from the social sciences and relating it to the goals of the “good life” as these are being formulated in emerging nations. We believe that such a synthesis of science and values is indispensable if education is to fulfill its purposes among rising peoples. With one of the contributors to this volume, we share the hope that in the emerging nations the “two cultures”—science and the humanities—will achieve a felicitous marriage that will result in a greater opportunity for man to realize his aspirations, one of the foremost being the hope for his own re-creation in a new image through education. Whereas we do not offer this volume as a philosophy of education for the developing world, we do believe that it raises the most urgent questions and reviews the primary alternatives with which such a philosophy must come to grips. The book is philosophical only in seeking to suggest both what we know and what we need to learn if education is to serve humane purposes in developing lands. We hope that its contents will stimulate the kind of thinking that will assure

* R. Freeman Butts has proposed these criteria as defining societies in which American education has much to contribute. See *American Education in International Development*, The John Dewey Society Lectureship Series, No. 6 (New York: Harper & Row, 1963).

many children, driving countless oxen and tilling countless plots all over the world, of the kind of education that will enable them to lead useful, inventive, and self-fulfilling lives. Perhaps this is educational philosophy at that.

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part one

THE DEVELOPING WORLD'S CHALLENGE TO EDUCATION

Any traveler through the underdeveloped world who is even peripherally interested in education cannot help but be struck by the obvious signs of the great faith in education. The signs of this faith are to be read in the faces of the people: in the puzzled faces of sun-tanned Moslem lads carefully tracing Urdu letters upon their slates under the canopy of a spreading tree, which is their village school; in the shadowed faces of white-shirted secondary school boys sitting in the pools of light under city street lamps, a silent congregation bowing over textbooks late into the night; in the proud faces of Wachagga scholars, accoutered grandly in undergraduate gowns, scrupulously recording the ordered process of English constitutional law in a new University College. These are the young being educated in the modernizing world, a strange world of transition between tradition and modernity. These are the signs of the great faith in education. But it is one thing to recognize the *faith* and quite another to understand the nature of the *educational* task that this faith imposes. In both gross and subtle ways

difficult for scholars in more advanced lands to understand fully, their counterparts in the developing nations are genuinely *transitional* scholars—moving not only from childhood to adulthood, but, just as significantly and with even more difficulty, from a traditional to a modern world.

The education they receive, like the education received by all students at all times, is shaped by the society of which they are a part and the culture of which they are the inheritors. As a philosopher of our century points out, the nature and goal of education are threefold: *inheritance*, *participation*, and *contribution*.^{*} What kind of society do these transitional scholars inherit, participate in, and hope to contribute to? A society filled with discontinuities and uncertainties. For example, the values of school and book are frequently out of joint with those of village and home. Even the "modern" future for which they hope is often bewildering and only superficially understood. No one of the three elements in their education—inheritance, participation, or contribution—can be simple for transitional scholars. Nor does any one of them present a simple challenge for those charged with devising an education appropriate to their time and situation. Yet, functional education, education worthy of its name, must be appropriate to time and situation. Thus, an analysis of the social context of transition and modernization and education's place in it must open any consideration of education for development. The story of development, or transition, is determined both by *what has been* and by *what is sought*. From only the technological point of view, modernity is uniformly understood and defined principally as man's increased control over his natural environment, his ability to maximize the use of available resources in serving his human wants, his expansion and control of physical power.

Modernization is more than maximizing physical power and productive capacity, more than making the most of available natural resources and thereby increasing the level of living. It is also a process of freeing the potential in people, maximizing their ability to share in the determination of the goals of their society and to participate creatively and effectively in the realization of these goals. Moreover, the moving ideas, the institutions

^{*} Ralph Barton Perry, *Realms of Value* (Cambridge, Mass.: Harvard University Press, 1954).

and the tools of modernity, Western style, have neater definition and greater uniformity than those of traditional society. With the goals of modernization quite uniformly defined, the movement from tradition to modernity is the social context of *transition*, and, in fact, this movement provides a reasonably uniform social context within which one may speak of education intelligently as a significant and manageable variable.

In this transitional situation, each of the components of education has its appropriate place: *heritage*, in providing not only the baseline for change but often the personal stability and integrity with which the individuals can face the future; *participation*, in providing the most meaningful framework for life that man has found; and *contribution*, the distinctive quality of modernization or change, in building the better future sought. Fashioning an education suitable to the social context of development will inevitably involve consideration of the role or place of each of these.

Part One of this volume is devoted to examining this transitional world and some of the forces shaping it. Chapter 1 opens with a trip to examine the remote rural schools in one of the emerging nations, so that the reader bears in mind from the outset the frailty and fallibility of the inherited instrument, *the school*, upon which we are relying to work the miracle of transformation—to reshape people, to remake society, to build nations. One way to recognize the momentous nature of the task imposed on these schools is to measure them against the goals and aspirations of the emerging nations, goals illustrated and catalogued in the final selection of the first chapter. Another way is to measure them against the vast extent and primitive nature of the underdeveloped world itself, a world that Paul Hoffman succinctly describes in the first selection of Chapter 2. But perhaps the immensity of their task is most clearly recognized when education is viewed alongside the forces that accompany it—forces that whet the demand for education and are in turn abetted by education. Such forces are rising hopes and expectations, urbanization and the lure of the city, technology, rural transformation and the unsettling of long-established means of livelihood. The second chapter in Part One is devoted to an examination of these forces, which both set the goals and define the context in which education must take place.

chapter 1

The Task of Education

1-1. We are all going to our classes

"And yet the faith is there . . . the faith in schooling as an answer to all our problems."

JOHN W. HANSON

There are many ways of looking at the place of education in development. To some this place may become merely an inference from a statistical table or from the economic plan of a nation. Such studies and such inferences are essential in making judgments about education. But to the educator, education is always something both greater and smaller than economic patterns; it is a process rooted in the lives of very real human beings, in the societies they have inherited, and in the better lives they hope to create for themselves and their children. Within this context education may be judged to be receiving little support or great support; it may be judged to be serving well or serving ill the aspirations of the people whose servant it legitimately is. The following informal account, taken from a study of the school system in one remote part of a developing country, represents one potential point of departure for considering the place of education in development. The study, of which this selection is but a part, consisted of an evaluative survey conducted by a university Faculty of Education, of the schools, the teachers, and the communities they hoped to serve. The study was designed

to provide data to help them devise a program that would make sense in terms of both the realities of the present and the aspirations for the future. It is through such studies, which are necessarily unique in time and place, that one begins to recognize the questions that really count and that always involve more than enumeration. These questions of *contents*, of *quality*, and of *impact*, are the significant questions wherever and whenever one considers education. It is here, then, in the schools and the lives of the people, that our theory of development really begins, for, above all else, we hope this book reflects a faith in the potential power of the schools to make a significant difference in the lives of human beings. This human element must always be the first concern in any attempt to solve the problem of education for modernity.

[John W. Hanson]

It was still dark when I pulled back the mosquito tent from over my head and crawled out to greet the Fourth of July. The Catering Rest House in Port Harcourt is one of the more modern government rest houses in Nigeria, and the electric lights shone out onto a small porch glistening with rain—the same rain that was to visit us daily the next three weeks. An inveterate worrier in a land where there is always much to worry about, I sloshed out to the car through a muddy field where the water stood inches deep to check on the safety of the food and equipment we had carefully gathered for our journey, then returned to the comfort of the chalet to complete last minute jobs which still plagued me.

The idea of a survey of existing schools, "bush" as well as urban, had been born in faculty discussions of the College of Education of the new University of Nigeria. The funds for our survey . . . had come hard upon the close of school; and many of the tasks which one ordinarily handles as soon as classes are out remained undone.

We were now about to start off on what promised to be a fascinating exploration of the schools in one of the most remote and inaccessible areas in what our research design referred to as "the area east

John W. Hanson, "The Cruise of the Dawn," *University College Quarterly*, vol. 8, no. 1 (1962), pp. 19-26, 28, and "Better Than Silver and Gold," *University College Quarterly*, vol. 8, no. 3 (1963), pp. 7-16.

of the Niger and south of the Benue." Immediately before us was the prospect of a cruise through the creeks and bayous of the Niger delta, an area rich in the legendry of early explorations but that now, with the inevitable shift to land transportation, finds itself further and further off the beaten path. This is the land where much of the early history of Nigeria was written—the treacherous mud flats where the tides had trapped the Portuguese and led to their massacre, the scene of the Akassa raid, the site of towns and kingdoms featured prominently in the ransom or death of the early missionaries. It is an area in which "taxis" are forty-foot dugout canoes, loaded with families to the point where the gunwales are scant inches above the water. In visualizing such a land, I had let my imagination run back to the days of backwoods camping, to the long wilderness treks of which I am so fond in my own country. How little I had reckoned with the heritage of the colonial administrator, I was soon to find out!

The enthusiasm with which I viewed our forthcoming "adventure" was shared by all in our party, and I soon had occasion to be glad that I had arisen before dawn to get my small jobs done. Accustomed as I had become to expecting appointments to be kept on "Nigerian time," by which is meant an indefinite period after the appointed clock hour, I was pleased and surprised to find our two student research assistants, Peter Nwachuku and Owen Abbey-Kalio, putting in an appearance before I had breakfasted. These were two of the ten student researchers we had selected to interview from more than 150 (out of a total university student body of 240)! My steward Lawrence, on whom we were to rely for sustenance during the next three weeks, was also on the scene before I returned from resthouse eggs and coffee. We hurried off to the Nigerian market to purchase our last staples of rice and yams, and knee boots, and to meet my faculty colleague, Dr. Ernest Ukpaby, who was completing last minute arrangements with Shell-BP to transport half of our party out by plane after the first two weeks. Then we were on our way to our "launch."

The surprise which was mine when I first came upon the *Dawn*, provided for our use as a courtesy by the Provincial Officer in Port Harcourt, is an interesting commentary on the way one divorces one's reading from the workaday world. An ardent enthusiast of Somerset Maugham, and one who at one time or another had devoured every short story he had written on British colonial administrators in the tropics, I was still unprepared for the "launch" that awaited me. The

Dawn was the local VIP boat (what more befitting a university professor?), some seventy feet in length, replete with bedroom, dining room, bath, lounging deck—and a crew of seven! Thoughts of weeks of roughing it vanished in the air and I was quickly ensconced on the observation deck, a cool drink in one hand and pipe in the other, watching the Niger's scenery glide by and already feeling the keen edge of problems involved in opening a new university in a strange land losing its sharpness.

Our party was now complete. It included two faculty members, Dr. Ukpaby, lecturer in education, and myself; and Owen and Peter. Ernest Ukpaby, who before joining the university had been an education officer in the area we were to visit, and Owen, who was the grandson of one of the famous chiefs of the area (and who spoke all but one of the languages we were to encounter), were to prove invaluable in planning our journey, making the necessary contacts, handling the "protocol" so important in establishing the quality of human relations essential to our purposes. Our supporting group consisted of Bluejack, quartermaster in charge of the *Dawn*; two engineers; and four able seamen. And then there was Lawrence, on whom we relied to locate and to cook our food, not a mean task with the appetites and customs of two continents to cater for.

It was not until we dropped anchor off Okrika, the first of the towns we were to visit, that I began to slip back from the role of "Colonial Administrator" in which I had let my imagination cast myself, and regained the feeling of educational researcher. The cause was both simple and picturesque. A dugout canoe filled with school boys and girls (the latter in their bright blue school uniforms) came alongside. They were on their way "home from school"—off to a village some four miles distant, the entire trip by canoe. The children waved greetings, speculated on our presence, and were soon on their way, their voices and laughter carrying back across the water. But even before they were out of sight, Ernest and I were likewise "on our way"—into the survey: by dinghy to the mudbank, on the back of an able seaman to shore, and then on to make the first of many arrangements to visit schools. The following morning the survey of forty Rivers schools was to begin in earnest, and we were to be at it for some three weeks.

Most of the life we viewed was on the river itself. While on occasion there were hours when we passed no living soul, at other times the streams were filled with dugout canoes, the canoeist perched

precariouly on a high fantail, his vessel loaded with palm nuts, firewood, or fishing traps. And always a wave and a friendly smile! On the wider streams we passed small houseboats, each with its thatched shelter—the home of a roaming trading family. Between the major cities there were canoe ferries, loaded down with a human freight and the inevitable commerce between the market town and the outlying village. Often we found the fishermen wading chest deep in the dark water, setting their traps or checking their pitifully small catch. Villages were few, situated on those rare rises in land which provided the only relief from the mucky swamp that was periodically inundated by the rising tide. Only the most promising boasted a school, perched high on a grassy bank, surrounded by a compound cut from the tangled mass of tropical foliage.

The habitations we passed were varied. Some consisted of only a thatched hut or two situated under a cluster of coconut palms bending gracefully over the river, dugout canoes drawn up on the bank before them. Such settlements had no schools, of course; but when one was situated within some few miles of larger villages, a rarely fortunate child might be privileged to canoe to school daily. If his parents were significantly better off than the average, he might even be enabled to stay with some relative in town and perhaps attend a senior primary school.¹

As the villages grew larger, there was always the possibility—rare but present—of a school having been started. Such a village was Bebibiri, a cluster of twenty thatched-roof mud huts, where we had been informed by a mission school manager that there was a junior primary school (grades 1 to 4). As the *Dawn* maneuvered up to the bluff on which the village was situated and sounded its horn for assistance, partially clad and totally unclad urchins ran to wave and shout greetings. One young chap in red pants climbed down to the water's edge to secure the mooring ropes; and Owen and I were soon off to visit a school that had never been visited before—by inspector, school manager, or any other outsider. Built in a beautifully kept compound of green grass and set off by flowers, the red mud, thatched-roofed school was a thing of rustic beauty. Two small mud-and-thatch teachers' quarters separated the "compound" from the rest of the village—a village made up of fishing nets set to dry,

1. The senior primary school runs through grade six. Ages tend to be meaningless for the determination of grade level, although youngsters generally start first grade at six or seven.

family huts (each with its protective juju shrine), and a government well, long since run dry.

In the little village of Bebilibiri I watched some of the finest and most enthusiastic teaching I have seen. It was not an expensive education these children were getting. There were few textbooks: the learning materials consisted of sticks and stones the children went out to collect in the school yard, and from which they were learning their number combinations. There were few school uniforms, much less physical training uniforms. For the latter class the tots stripped off their pathetically few school clothes, piled them neatly on their benches, and went out to join in their native dances and native games under the guidance of their schoolmaster, who played as one of them. (Many of the schoolmasters were exceedingly young, having just completed the primary school themselves. We often jokingly commented that the only way to tell the schoolmaster from the pupils was to note who wore shoes; but in Bebilibiri even that distinction vanished, and I was most amazed to discover that the boy in the red shorts who had moored our boat was the headmaster of the school, and a most excellent one at that!)

Wherever we went we were made to feel welcome, and perhaps nowhere was the welcome more heartfelt and sincere than in such villages as Bebilibiri. Here as we sat observing the classes, the village elders and all who remained in the village lined the outside of the building, carefully observing the observers! And as we left such villages there was always the expression of appreciation. Usually this took the form of the ceremonial giving of a pair of chickens, and before long Lawrence's galley on the launch had become a veritable poultry farm. However much the results of our research in such instances were vitiated by fuss and feathers, one could not help feeling that we were rendering a service in symbolizing to these remote and simple people that there is nothing inherent in a university that divorces it from the concerns and interest of the humblest people in the society it would serve.

But all of the towns we were to visit could not be minute Bebilibiris. Indeed, few towns of its size could boast even a junior primary school. Most of the schools of the Rivers are located in the larger towns, which serve as foci for the trade, transportation, and administration of the surrounding area. Of such towns my favorite was Nembe, traditional tribal seat of the Nembe people, rich in the history of the early conversion to Christianity. As the Dawn pulled up at the small

wharf beside the government dispensary, the town presented that same combination of the picturesque and the grotesque growing up side by side, which is characteristic of many African towns. Looming in what was designed to be majestic grandeur above the mud, thatch, and tinned shelters of the humble were the imposing new edifices of the "wealthy": large multi-storied buildings of cement, gaudily painted and adorned with innumerable pillars and porticos. Picturesque houseboats and dugout canoes nevertheless had to share the scene with galvanized public latrines, the town thus making use of the only sanitation system the saturated land could allow.

The schools of Nembe were situated on the outskirts of town, cut into the jungle that surrounded the elevated land on which Nembe itself is situated. When Monday came, Owen and I took the precarious dugout trip, in a vessel loaded to overflowing with school children and women headed for the market, to Bassambiri; and after wandering through the narrow lanes of the town, we came at last to the County Council school. Here, indeed, was evidence that the rainy season was with us; and we were glad for our knee boots, as we had to wade through twelve inches of water to reach the school itself. How practical the barefooted school youngster! (I was more pleased with our rainy season arrival when I learned that one of the dry season problems in Nembe arose from the boa constrictors, traditionally worshipped in Nembe, which still safely invade the school compounds, unmolested save by adventurous and playful school children!) The so-called permanent type of open-air school building, constructed of half-walls of cement and surmounted by a tinned roof, supposedly provides great advantages over the simpler thatch and mud structures which leak water and crack and crumble with the passage of time. But even such a building proved no mecca for learning. The water made the storage of many instructional materials unthinkable; the steady drumming of the rain on the roof made hearing nearly impossible; and the driving rain covered the floor of the classroom, in which I was observing, with an inch of water. But against such odds, teachers and pupils work diligently; and learning does move forward.

Perhaps my last remembrance of Nembe is, however, Waribugo, one of the pupils in class. He had been without a pencil for a drawing lesson and had been sent home to fetch one—a mission which proved pointless as there was, of course, no pencil at home either. I fished through my own pockets and came up with a stub. I had

won a friend indeed, and throughout the day I shared a *New African* reader with Waribugo; and as Owen and I were about to step into the dugout ferry on the way back to the *Dawn*, dashing down the streets of Bassambiri came my friend Waribugo, bearing gifts—two large coconuts, which we added to the unusual larder, which Lawrence was building up in his little galley. . . .

Standing stiffly at attention, rosy tan hands pressed in salute against black smiling faces, the pupils greeted their teacher, their classmates, and a new school day. To one from an educational system characterized by informality and dedicated to individuality and spontaneity, the daily pattern of Nigerian education seems dreadfully formal and brittle. As we moved from school to school throughout the region, we found that the details varied but the form was invariably the same.

To come to a school early in the morning is to watch an impressive ceremony. The youngsters arrive in school uniform, each with his scanty books or his bright metal book-box balanced (no hands!) on his head. If it is handwork day, or "compound day," a partially woven basket, a machete, or perhaps a large rock for lining the garden balances in the ascending pyramid on top. The uniform is invariably simple: for boys a much-mended white shirt and khaki shorts; for girls a simple cotton dress of some readily available single color, perhaps most frequently blue or white. In the well-to-do areas of the mainland, great premium is placed on neatness and intactness of uniform. In such remote spots as the Rivers district, poverty often makes the most distinguishing mark of the uniform its rents, tears and frayed collars.

On arriving at school, the children assemble by classes in the yard or "compound." Here prayers are held, an occasional inspection of hands and faces is made, and school announcements are given. Then, singing brightly in unison, the youngsters march around the compound, and the day is off on a cheery note. Into the classrooms they march, give the formal greeting to classmates and teachers, answer the roll call, and, upon command, take their seats.

The remainder of the day is dictated carefully by the timetable, an elaborate checkerboard of classes frequently determined by the mission school manager for all the schools in his district. Elaborate as the timetable is, its most striking feature is that it is too frequently not a guide but a master. As the entire school operates within the same periods, a bell is usually rung or the call of "change lessons" given at the breaking point for each class; and like clockwork the

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teacher "completes" the lesson he is on, reserves the rest of it to the next day, refers to the timetable on the wall to discover what comes next, and moves on to the next subject designated. Almost as if to alert the students to the change in subject, some teachers signalize the break by sharp commands to *stand, sit, stand, sit!*

Although there are variations from instructor to instructor, the uniformity of the classroom procedure is testimony to what teachers consider the earmarks of good instruction. At the beginning of each class the portable blackboard is cleaned or turned by a student. The name of the next subject to be pursued is written at the top of the board, followed by the date. Depending upon the subject, students take out their readers (if they are fortunate enough to own them) or their exercise books, into which they copy meticulously (pen and ink only allowed!) the arithmetic problems, drawings, sentences, or words which the teacher places upon the board.

The devices of instruction are amazingly uniform. Learning being largely directed toward the acquisition or memorization of factual statements which the teacher or textbook has made, there is much room for unison work. In the multi-class school buildings, the sing-song of unison recitation is almost always with one. At times complete sentences or verses are memorized, but too frequently the recitation is verbatim memorization of a word or phrase the instructor has just employed. The pattern is frequently thus:

Teacher: St. Paul went next to Jerusalem.
St. Paul went next to. . . .

Class: Jerusalem!

Teacher: There he met the crowd which was waiting for him.
He met the crowd which was. . . .

Class: waiting for him!

But the major teaching device is the question and answer recitation. The pattern is familiar to all of us, but the stern hand characterizing the formalism of our own past still rests heavily upon the Nigerian classroom. The student who would respond to the question, upon being acknowledged or singled out, invariably stands at attention to answer. If his answer is considered correct, he may sit down. Should he be wrong, he remains standing until the question is answered correctly by some other student. Rarely are student questions suffi-

ciently encouraged. A final bow to the spirit of inquiry is sometimes made at the end of the period when the last two or three minutes are given over to student questions; but the questions are all too often limited (by teacher scorn or commendation) to requests for repetition of facts already presented in class, too seldom opened to ideas which the class discussion has not touched upon or sufficiently amplified.

It is strange to move half a world away from home, into a culture of fisherfolk, palmcutters, and petty traders, and hear the familiar complaints voiced by the schoolmasters. And what was their greatest concern (except money)? Falling standards! "The schools just aren't as good as when I was in school! Anybody can pass the school-leaving examination now, whether he knows anything or not!" How familiar! What trick is it of human nature that overvalues the merits of our own experience and its particular merits?

The concern with standards has unfortunately been linked with a desire for uniformity. Hopelessly overworked and understaffed, the inspectorates of the ministries of education can give all too little of the supervision and help they long to provide. With an untrained group of teachers, it has thus been natural to seek other ways to assure the content and quality of instruction; unfortunately most of these attempts have led to uniformity, not to that healthy diversity which comes with experimentation and adaptation to the opportunities of the local environment. Thus we found a common syllabus, a prescribed set of textbooks which lay down the minimum teaching procedures step by step, a region-wide examination for the school-leaving certificate. Such devices are designed to provide a minimum of commonality; in point of fact, in the hands of insecure teachers they often act as shackles to the tedious, not as springboards to the possible.

Gradually, however, the curriculum inches toward the practical, the significant, the educational, the spontaneous, the locally relevant. As might be imagined, spontaneity and ingenuity show forth intermittently first in the "fringe" subjects, not in the four R's (readin', 'ritin', 'rithmetic, and religion.) To date creativity and enthusiasm appear most clearly in physical training and vernacular. Here the traditional dances and the chronicled tales of the campfire and the palaver house bring the student and the instructor together in genuine participation. But how often the opportunity for significant learning is still pathetically squandered; rural science still too often degen-

erates into routine hoeing of a school compound; handwork too often becomes recess for children, paper-checking time for teachers; nature study, in a school surrounded by verdant nature, is frequently the meticulous copying of the teacher's diagrams of "the four types of roots" from the blackboard into the pupil's copy book, with never a thought of a live plant, a real root, or the process of life that virtually engulfs them! Religion, so vital a force in the life of the folk, becomes the routine memorization of Biblical names and places—or, as one of our student researchers wrote, "an elaborate spelling lesson on the names in I Samuel!"

"Obedience is the first law of heaven"

Nigeria is a new nation justifiably proud of its nationhood. It is equally proud of its attachment to democracy and the liberal tradition. It has pinned its faith upon the flagpole of education. This faith is reflected in the budget of Eastern Nigeria, which annually allocates half its funds to the maintenance of its schools. It is reflected in the endless quest for education: the faith of the poor fisherman, the palm cutter, the farmer who will scrape together his pitifully few pennies to send his son or daughter to school. Education is the panacea, but as is so often the case in old as well as new nations, the question of what education and for what end is still often begged.

Enabling the classroom teacher to translate the glittering generalities about Respect for Human Dignity into his day to day operations will be one of the challenges facing new teacher training institutions. I remember the motto written in chalk on the door of one of the humblest of the schoolrooms I visited: "Obedient is the first law of heaven." I have little knowledge of whether this is so or not, but I am dreadfully afraid it is the first law of Nigerian schools. And it is unfortunately a law which is still too often brutally administered. We were witnesses of canings, though rules forbid them; and where they are not the practice, teachers frequently complained bitterly that "discipline had broken down."

The partner of obedience in the scheme of values appears to be respect, but the respect which is sought is peculiarly a one-way street. Somehow or other, respect for each person as an individual and respect for an inquiring mind do not enter into the picture. Lack of respect for human feelings showed most clearly in the worst of the teachers we observed: one who had a class recite in unison "Shame on her,"

"Shame on her" when a little girl attempted to answer a question and could not; another who stood in front of class and mimicked a child who had difficulty in speaking clearly.

More alarming was the fact that personal understanding was too often lacking among even the best trained of the teachers we watched. A young woman headmistress who organized for her Infant II class (about first grade) a wonderful lesson on money (setting up a simple market stall where children came and made purchases from one another) could at the same time send a child to stand facing the wall, hands above her head until the end of the hour, for giving a wrong answer! A man who could help students see practical means of helping friends and neighbors improve the purity of their water supply could the next minute ridicule publicly a youngster whose pen did not work and who had to put ink in the palm of his hand to make the precious script so important in the copy books. (And this despite the fact that he had just informed me that the adult with whom this particular child lived confiscated all the money his brother sent him for school supplies!) And what is true of the respect for individuality is equally true of the respect for free inquiry: questions are for teachers to ask, not students; answers are for textbooks to provide, not experience!

Learning is better than silver and gold

Sedilia

Sedilia

Sedilia

Sedilium

Sedilibus

Sedilibus

Marcus Tullius Cicero orator magnus erat.

Romani Ciceronem laudabant.

These words on the blackboard greeted me as I took cover in the classroom from the outdoors arriving in knee boots and rain suit, wringing wet after trudging three miles through a driving downpour in one of the rainiest parts of Nigeria in the heart of the rainy season. The first mile had been through "city" streets, lined with shops and stalls and houses, for this was the second largest port in the Rivers area, a city proud of itself and its status as a distributing center. And now, on the last day of my Rivers trip, I was in the

newest symbol of that city's pride—the new Community Grammar School. Where my jacket had provided incomplete protection, I was soaked with rain; where the protection had been greater, I was running with perspiration. I was, indeed, a most sorry school surveyor; but before me was being acted out one final tableau of Nigerian education.

The brand new classroom building was a one-story structure laid out beside a large and partially developed playing field. The room in which I found myself was clearly the most attractive of the entire trip. Permanent construction, glass casement windows and glass doors admitting ample light, a ceiling that screened out the sound of the driving rain, an adjacent room which housed the nucleus of a small library and the pitifully small beginnings of an assemblage of old magazines and newspapers, new individual desks and chairs—all combined to provide a suitable setting for learning.

A proud town had brought in the headmaster from a great distance, and he was clearly a scholar and a teacher. As I began to dry off enough to devote my attention to what was going on around me, I became aware that I was watching a competent professional. This was not the rote memorization of detail I had observed in so many classrooms. Here errors of fact were not allowed to undermine the value of enthusiastic instruction. Here students were not ridiculed when they made an error. They were questioned about the logic of their translations—did they make sense? And translations were not limited to isolated decipherings of individual words. Here students were asked to try to correct their own errors, and only when they were unable to do so were other students encouraged to try to improve on what had been done. I was, in fact, observing good classroom teaching. And yet as I watched what was going on before me, as I applauded the enthusiasm of the scholars and the competence of the teacher, I could not help feeling the same malaise arise within me: something was dreadfully wrong, not with the teaching I was observing, but with the tradition Nigerian education was still accepting and endorsing. But perhaps even this is not fair: perhaps it is what is wrong with school education in general, and it is only because we have blurred the sharp outlines of our outworn traditions in America that one is more aware of it in the remoteness of rural Nigeria than in the prominence of urban Michigan.

Here was a brand new secondary school, built by a poor community lacking really adequate sanitation, a decent standard of living for

many of its inhabitants, libraries, and paved streets. It was in a town in a region that has not yet developed a means of livelihood that will support the majority of the people in health throughout the year, a town and an area needing new insights, new ways of doing things. To these people education is the torch, the answer. And a new secondary school is built in the hope that more of their youth can get some further education. But as one looks at the class schedule one is forcibly reminded of home, of the educational system we know, of the traditions the western world has established for the school:

	I	II	III
MON	Dictation	Latin	History
TUES	Geography	English Comp.	English Comp.
WED	House Mtg. & Singing	English Lit.	Geography
THURS	Geometry	Latin	Arithmetic
FRI	Singing	Gen. Sci.	Gen. Sci.

	IV	V	VI	VII
MON	English Lang.	English Comp.	English Lit.	Geography
TUES	Geometry	History	English Lit.	Religious Knowledge
WED	Latin	Arithmetic	English Lang.	Library Reading
THURS	Algebra	General Sci.	Self-help	History
FRI	Religious	Algebra Knowledge	Library Reading	Dictation

For a Nigerian secondary school, commendable—hours for library reading! provision for house meeting! But does this schedule really reflect the education needed in a country where people know little of their own government, where the economy is often barely above subsistence level, where disease continues to take its deadly toll, where new crops and new means of livelihood are desperately called for?

And yet the faith is there . . . the faith in schooling as the answer

to all our problems. The enthusiasm of bright shining faces! What finer challenge for education? What greater hope for the future?

As I took my leave of the headmaster and his dreams for his school, and started to trudge back to the Dawn where Bluejack was impatient to be off for home port, a tune kept running through my mind. And then the words to the tune came out into the open, words of one of the popular school marching songs which a Standard V teacher had kindly written down for me. And as I trudged along it suddenly occurred to me how truly these words reflect much that is fine about Nigerian education, and yet, both by what they say and what they leave unsaid, tell so much about what is as yet so pathetically lacking, about what yet remains to be done:

We are all going to our classes
With clean hands and faces
To pay great attention to what we are told.
Or else we shall never
Be happy and clever
For learning is better than silver and gold.

1-2. The key role of education

"Education is not a luxury which can be afforded after development has occurred; it is an integral part, an inescapable and essential part, of the development process itself."

DEAN RUSK

The process of achieving modernity, the process of development in its broadest sense, is one of fundamental transformation in the mind and character of man and in his ways of employing the material world to attain his goals. Essentially education in America has been viewed as an agent of such transformation or development in its people and society. Education has not always and in all places been so viewed, but for us the achievement of a better society and a more abundant life has always been the crucial educational task—the

larger task that gives sense and meaning to subordinate educational aims and programs. This American faith that education should be geared to development and that education is the single greatest instrumentality of development has been well stated by Dean Rusk. The relevance of this American conviction and our American experience in implementing it in the new nations of the world, where one of the great bottlenecks is the shortage of appropriately educated people, is clear. This volume explicitly asks those questions and proposes those guidelines that are crucial for the translation of the faith expressed by Dean Rusk into action programs adequate to meet the challenge.

[*Dean Rusk*]

The United States, the American people have had from the beginning what some people have called an inordinate national interest in education. From the very beginning we emphasized on these shores a strong attachment to the educational process. First it was to educate ministers and our other professional manpower. But something very important happened in the middle of the 19th century, which is directly related to our topic today. Because we then were a rapidly developing country, we had great potential of resources, great shortages of trained manpower. We had a continent to open up and develop.

Next year we shall be celebrating the hundredth anniversary of what we call our "land-grant college system." Those land-grant colleges and universities were invented in essence to assist in the process of development. They did not phrase it that way at the time, but that in fact was the purpose which underlay our interest in agricultural, mechanical colleges, and that indeed has been the role played by these great institutions.

Alongside them have been hundreds of private institutions and indeed tax-supported collateral type universities, which have played more traditional roles. But for us in this country, education is not something which is a luxury which can be afforded after development

Dean Rusk, "Address at the Opening Session at the Department of State," *Policy Conference on Economic Growth and Investment in Education*, I (Paris: Organisation for Economic Cooperation and Development Publications, February, 1962), 17-20.

has occurred; it is an integral part, an inescapable and essential part, of the developmental process itself.

Many of you come from countries which reached a degree of economic and social development long before you were born. One thing you might bear in mind, as you think of some of the exuberance, some of the enthusiasm, some of the naiveté, if you like, which you might find here in this country about the possibilities of development, is that the more spectacular development of the United States has occurred literally within the generation of people now living; that is, many Americans coming from different parts of the country grew up in a predevelopment community or environment, on pre-scientific farms, in communities where there was no medical care, where doctors were relatively unknown, where science and technology had not begun to make their contribution to development.

So that whether you are talking to the Vice-President of the United States or many of our citizens in the ordinary walks of life, you will be in touch with people who remember in their own experience what development can mean, and development under free institutions.

We are not ourselves willing to concede special advantages to totalitarian systems in this field of rapid development because we believe that we have experienced personally and directly the transformation of the lives of people within one generation by the processes of economic growth under free institutions. And in that process, education has played a most vital role. Indeed, I suspect that the Soviet Union today is getting a dividend of a lot of morale out of an aspect which has little to do with Communism as such. For the first time in Russian history, the sons of peasants, the sons of lowly workers, and their daughters, have an opportunity to study medicine, to study law, to turn to science, to teach in universities, to take hold of opportunities which their fathers could never have dreamed about.

We had some of this experience ourselves in the first half of this century, in many parts of the country. And that produces a surge, an interest, a liveliness, a morale which is of very great importance in this process of development, because development depends upon people, their attitudes, their aspirations, their energies, and their willingness to do something about it directly themselves. . . .

I would suggest that the bottleneck in development today right around the world is not exclusively money or capital resources; a crucial bottleneck continues to be people.

During the years when I was working for the Rockefeller Founda-

tion, more often than you will imagine, funds were marking time because there was not the qualified manpower either on the giving side or on the receiving side to make those funds profitable on the other end.

I think if we look at the problems of development in country after country outside the West, we shall find that people are the bottleneck, and this means that education has a crucial role to play. And this I suspect is the great difference between the possibilities of a program like the Marshall Plan and the problems of the developmental programs in the non-Western parts of the world which we see at the present time.

So today in this country we recognize that education has a variety of roles to play. The democratic institutions cannot exist without education, for democracy functions only when the people are informed and are aware, thirsting for knowledge, and are exchanging ideas.

Education makes possible the economic democracy that raises a social mobility. For it is education that insures that classes are not frozen and that an elite of whatever kind does not perpetuate itself.

And in the under-developed economies education itself stimulates development by diplomatically demonstrating that tomorrow need not be the same as yesterday, that change can take place, that the outlook is hopeful.

Even in developed economies, education is a key to more rapid and more meaningful economic growth. The old adage has never been more true than today that there is plenty of room at the top. Advanced education is the base on which research and development rests, and the foundation of technological progress.

But it is through mass education that the discoveries of the laboratory are applied in the production process, insuring more rapid growth than could occur merely through interest in the acres of land or the number of machines and the total number of man-hours worked.

Knowledge can be found by the few, but it must be applied and distributed by the many. . . . For education is an investment, and a good one. It yields a high rate of return.

It is no secret that this Administration believes in education in this country, and in our aid programs we shall devote increasing proportions to educational development, not merely because education is a vitally important social service as it is, but because education is a good investment. . . . Education, desirable in and of itself, makes sense in economic terms as well.

1-3. Educational tasks for a nation

"The aim is to produce a nation that will be both modern and free: no lesser goal will suffice."

JOHN W. HANSON

The following selection by John W. Hanson is a statement of the almost impossible demands placed upon an educational system to meet the needs of a rapidly changing world. The items pointed out as essential for education in Nigeria are as relevant to the modern areas of the world as they are to those in transition. The faith people have in education to supply the solution to world problems is graphically indicated here.

A realistic look at human nature, man's history, and the size and scope of the problems besetting us today lead one to doubt that any nation can realistically expect schools to solve all its national problems. However, in societies where experimentation is allowed, where men are encouraged to try to find solutions to human problems, some schools will develop programs that succeed very well in advancing toward these goals. Schools such as these serve to show the way and provide proof that the goals of the national educational program can be achieved, and thus that attempts to reach them are not exercises in futility.

[John W. Hanson]

One of the most important insights of the new African nations is their clear recognition that education is the greatest instrument man has devised for his own progress. Education has not always and in all places been so viewed. All societies have education; but the

John W. Hanson, "The Nation's Educational Purpose," *Nigerian Education*, edited by Okechukwu Ikejiani. Ikeja, Lagos, Longmans of Nigeria, Ltd., 1964, pp. 20-32.

trail of human history is marked by the wreckage of those nations which have used their education merely to perpetuate what existed, those nations which have failed to recognize that the forces of time are hardest upon those that fail to move with them. Dynamic and progressive nations demand more of their education than this: they demand an educational system that will take leadership in piloting and manning a future which will assure a better life to all. Thus Nigeria's educational purpose is the same as the national purpose: to create a good society and good life for all its members and to use all the intellectual and moral resources man has developed, all the resources he is capable of developing, in the pursuit of this goal.

In one of the most significant twentieth-century volumes on ethics a noted philosopher at Harvard University caught the spirit of this forward thrust of democratic education when he commented:

Through education men acquire the civilization of the past, and are enabled both to take part in the civilization of the present, and make the civilization of the future . . . Because the future is only partially and uncertainly predictable, and because human faculties are inventive and resourceful, education for the future implies education for a future which is of man's own making. This has been held to be the essentially . . . democratic idea of education.¹

The orientation of education in a dynamic society such as Nigeria must always be an orientation toward the future. Such an education will not discard the heritage of the past: rather it will draw virility from the strengths that existed in its heritage, but demand that the very strengths of this heritage meet the terms of new times. Such an education will not ignore active participation in the world of today, for only by participation in the life of the people can strength be maintained and sensitivities sharpened. But its sharpest focus will be upon contribution, contribution in terms of solving the problems of today and building the better world of tomorrow. In essence, then, the national purpose for education is to equip people to participate in, and contribute to, the modernization process in Nigeria—the process of creating a style of life that will bear the imprint of traditional strengths even as it adapts new stratagems and technologies to its corporate life.

Obviously this national purpose requires direct attention by the

1. Ralph Barton Perry, *Realms of Value* (Harvard University Press, 1952), pp. 411-12.

schools and the courses of study to the principal social aims of education: (1) It demands increased attention to the *civic and political* needs of the nations: to developing new attitudes toward government and law, to concern with effective participation in the political process, to placing national interests and well-being above narrow tribal or local interests. (2) It demands increased attention to the *social and personal* needs of the nation: to improving the health and well-being of the people, to solving problems of mental and physical health as they arise, to maintaining the individual's self-respect and self-confidence in new surroundings, to relating the new cities with the rural communities in a spirit of partnership, to increasing rather than breaking down the respect of different age-groups for one another. (3) It demands increased attention to the *economic and technological* needs of the nation: to selecting and educating qualified individuals for high-level positions, to equipping technical and agricultural manpower with skills that will produce maximum efficiency in using natural resources, to developing a new spirit of economic innovation, and to building new attitudes toward saving, investment and purchasing.

Although it is true that education must thus serve national purposes, it must always be remembered that in a democracy the nation is ultimately designed to serve the individual, not the reverse. It is thus incumbent upon the government to assess its educational programmes in terms not only of how well they serve national schemes, but also of how well they serve the individuals themselves. It is never only the nation's political, social and economic development that is sought; it is also an improved quality of individual social participation, economic betterment, and political contribution. Democracy rests its case on its ability to harmonize the freedom and well-being of the individual with the strength and well-being of the society. The aim is to produce a nation that will be both modern and free: no lesser goal will suffice. It is only within this framework that education for economic growth, education for civic and political development, and education for social and personal integrity have democratic meaning.

Education for economic growth

Investment in Education, the report of the Ashby Commission on Post-School Certificate and Higher Education in Nigeria, has early

and deservedly earned a place in the history of educational planning. The compliment of imitation which has been paid this report in subsequent planning ventures in other nations is a tribute to the obvious soundness of its basic orientation. What is the essence of this orientation? It is an orientation toward the future: an orientation toward the type of Nigeria one might envisage with the passing of two decades. The Commission recognized that only when the vision of the goal is clear can sound programmes of action be planned.

The intellectual climate which produced this approach to education was in no small measure the outgrowth of a new emphasis in economics—a serious concern with what has come to be known as developmental economics, that is the process by which nations have in the past and might in the future bridge the gap between traditional and modern economies. Serious studies by economists of the leap from traditional to modern economies indicate what educators had long suspected and maintained—that in modern societies the economic output has been far greater than might be accounted for strictly in terms of the investment in plant and raw materials. The “unaccountable” increment in economic output may be attributed to several factors—but obviously the most significant of these is the quality of the human resource input which is likewise part of the economic equation. The quality of the human resources, which so largely accounts for the change in economic output, is in turn in very large measure dependent upon the quality of the educational system of the nation. On the basis of such an analysis it becomes clear that one of the greatest investments Nigeria can make in its economic future is an investment in the appropriate education of its people.

The obvious but by no means the only way in which an investment in education is an investment in economic growth is through the production of skilled manpower. The growth of the modern industrial system, or the balanced industrial-commercial-agricultural economy, has rendered virtually obsolete unskilled and untrained manpower in modern nations; it has at the same time rendered absolutely indispensable highly skilled manpower. It is inconceivable that the future projected by the Ashby Commission or by the informed national leaders of Nigeria can be achieved without a revolutionary upturn in the training rate of well-qualified people.

Clearly the type of industrial and economic expansion which a vision of the future demands in Nigeria will place tremendous demands upon

the nation's education if it is to provide for the high level manpower needs of industry and commerce. Administrative, managerial, professional and scientific personnel of all types will be demanded if industrial growth is to be possible. Behind each executive, each trained engineer, each research or developmental scientist, there will need to be a large intermediate supporting cadre of well-trained technicians, skilled craftsmen and well-qualified clerical help if enterprise is to move forward. Not only will such people be needed in the industrial, technological and commercial sectors of the economy, but they will be strategically important in other sectors as well. The central role of the government in planning, expediting, and implementing economic development will require that its ministries be staffed by equally well-qualified individuals. The agricultural revolution which must accompany industrial development will have demands of its own. Research institutes manned by less than top-quality personnel can produce nothing of top quality, and a school system which is not itself equipped with its fair share of first-class minds will be completely unable to provide the acceleration in quantity or enhancement in quality required.

But it is more than knowledge and new technical skill which is demanded in a nation that would be modern: it is a whole set of attitudes which create the climate for modernization. First and foremost, the schools of the nation must foster a spirit of innovation in their students—a desire to try out, to experiment, to create. Progress is never made by standing still but by developing the new. Second, the schools will need to share in developing a new spirit of adventuring. The traditional attitudes, the clerical mentality which finds it most acceptable to seek the security of a government office, must give way among an increasing number to a willingness to take a chance, to strike out on one's own, if economic growth is to be rapid. Third, a healthy attitude toward productive labour, toward doing a technical job, toward getting one's hands dirty in the process of creating or discovering or doing, needs to be restored. Office jobs alone will never build a new Nigeria. Finally, there is needed a whole series of new functional attitudes toward efficiency, hiring and promotion. Functional competence, not family or town or clan loyalties, must become the criterion used when filling the niches in a modern industrial society. The task of changing such attitudes is formidable; a barren, scholastic course of study in the schools is little apt to prove adequate

to the challenge! New approaches to both course of study and school atmosphere or climate must be found.

Education for national unity and political development

Staggering to the imagination though the demands for developing skilled manpower and economic attitudes are, such aims can never constitute the sole purpose of education in a democratic society. The economic system of the nation is an indispensable tool in providing for the material well-being of the country and in ensuring those minimum conditions which permit people to live an abundant life. But it must still be the servant, not the master of the people. The report of the African educational leaders assembled at Addis Ababa in 1961 laid appropriate stress on this point when they placed early in their report the following caution:

Education does not have for its primary purpose a greater production of goods and services. The purpose of education is to broaden understanding, so that men may make the fullest use of their innate potential, whether spiritual, intellectual, or physical. Education would therefore have value even if it contributed nothing to economic development. Education is listed among the universal human rights; it is necessary for the full development of the human personality, and is grounded in respect for human rights and fundamental freedoms.²

In nations which have newly gained their independence it is important further that any advance in economic productivity be accompanied by a development of those political skills and knowledges and those democratic and human ideals which will enable the people to assure not only the just distribution of the goods the economy produces but the widest availability of other social and human advantages which a modern economy makes possible. New nationhood and political democracy have demands of their own (demands which are basically civic rather than economic) to make upon the education of the nation. Any nation overlooks such demands only at its peril.

Among the foremost of these national civic purposes in education is that of emphasizing the sense of nationhood in all the people. Here the need is a particularly complex one. The only intelligible goal

2. UNESCO. *Final Report, Conference of African States on the Development of Education in Africa*, Addis Ababa, 15-25 May 1961.

open to a nation proud of its human richness is that of Unity in Diversity. It is not by suppressing the wealth and variety of traditions which are brought into the nation that a new democratic state can be built. It must rather be by weaving a many-coloured cloth of heritages and peoples for the new garment of nationhood. The new garment of nationhood must warm, not smother, persons of all regions, tribes and peoples. Our education must teach each to respect the traditions and the contributions of all the others. The unity which is sought must never be a unity of suppression, but a unity of contribution. Only then can unity provide the security with variety which assures a truly abundant life for all. The political and civic purposes of education are not limited to a concern for national unity, however. The primary basis of a political democracy is a literate and informed electorate capable of making the decisions which the political system requires of it. If intelligent decisions are to be reached and if the population is to be able to register its judgments effectively, literacy is a minimum requirement. This literacy cannot be limited to certain sections of the country or to urban as contrasted with rural areas. If all concerns of the nation are to be adequately represented, the ultimate national goal must be literacy for all, irrespective of region, remoteness from the centres of activity, or economic status of family.

Important as widespread literacy is to the effective functioning of a modern political democracy in Nigeria, it is but the beginning of the education of the citizen. Upon this foundation must be built a sound political or civic education which will not only teach people the rights of freedom but the responsibilities of freedom. The national purpose in education cannot be served until there is a clear-cut recognition that facts *about* civic responsibility are not necessarily education *in* civic responsibility. Responsibility, intellectual and civic, is acquired only as persons practise it and live it. This will require a much more imaginative approach in our schools than has heretofore been developed. Students must actually participate in determining upon and carrying out the responsibilities of the citizen in school and community.

Urgent as this civic and political education for nationhood is, it is still not a sufficient civic education for the young African growing up in the twentieth century. No longer are we merely citizens of a nation: we are or must become citizens of the world. Modern society

is not the product of one nation or one continent: it is the product of our times and our merging heritages. African nations are emerging on a world scene in which they must help shape the destiny of man not only in our time but for all the future. The new Nigerian citizen must bear his share of the responsibility for shaping that destiny. He must understand the nature of international forces and the new international institutions which man has established to control these forces and to advance the cause of human peace and welfare. He must acquire the skills of language which will enable him to communicate effectively and cooperate with his neighbours who have different colonial heritages. He must be concerned with human inequality, oppression, and affronts to human dignity wherever they occur, and must be insistent that his own government take leadership in eliminating all such social cancers. Today as a citizen of a nation which is the beneficiary of external economic and technical assistance, he must be committed to the ideal of making his nation's contribution balance what it receives. He must understand and accept the responsibility of his nation in contributing its newly acquired skills and knowledge, its new insights into the process of development and modernization, to other peoples who are thus far less fortunate. He must, in short, understand and take pride in accepting the responsibilities of being a citizen of a leader among nations and be willing to make the sacrifices that this will at times necessarily entail.

Education for personal and social development

It cannot be denied that there are many problems in a new nation composed of persons with strong tribal, clan and family loyalties. The national purpose in education, however, is not to destroy these loyalties and the accompanying sense of responsibility, but rather to transform them into loyalties and responsibilities to an ever-widening social group. It is not that the nation wishes the young to respect their families and their tribes the less, but that it wishes them to respect others the more. It is not that the nation wishes the young to feel irresponsible in terms of the demands of their communities; it is rather that the nation wants the strong sense of responsibility to be expanded to include new communities, political regions, and the nation itself. One needs only to go to the less privileged areas of larger cities to observe the disastrous consequences of a loss of social

group identity upon many of the young! Healthy individuality and sound personality are not built by surrendering all group loyalties but by supplementing and overlaying old loyalties with new.

Undoubtedly requiring a still greater break with out-of-school traditions, and consequently becoming even more difficult, is the task of the educational system in building into the young a new attitude toward the control of their physical environment. The culture of the twentieth century is one which is built upon man's confidence in his ability to control his environment through the instrumentality of science, natural and social. Essentially science is not a body of facts. It is an approach toward the universe, a way of looking at forces in the interest of controlling them and using them for our purposes. It involves not looking upon the world as malignant or unmanageable, but as an understandable and manageable resource for use in achieving human goals. This is to say that the man of the twentieth century views the world as potentially amenable to the control of man through verifiable human knowledge. An education committed to modernity must, consequently, place a high premium upon science education, in order to understand and control our natural environment, upon health education in order to preserve and enhance the quality of human life, and upon social science education in order to regulate or control our man-made environment.

Embracing though the nation's educational concerns are of all types of communities, the nation must in these times give special attention to the problems of the new human environments for which traditional patterns of life have been proving inadequate or inappropriate. Urgent among the new national purposes in education must be that of equipping those who have experienced nothing but a rural environment (and whose traditions were designed to deal with a rural environment) to cope with the confusing demands of urban living. A nation committed to a respect for human dignity must face realistically the problems of purposelessness, delinquency, destitution and even squalor which plague large areas in many new cities; and it must use the agency of its schools to help remedy such problems. Equal attention must be given to gearing the educational system to meeting the impact of the new urban, industrialized environment upon the rural community as the arms of new transportation systems reach out to touch the most remote areas. An educational programme that fails to provide the elements of understanding, character and judgement necessary to deal with new situations will ill serve the national purpose and will be productive only of personal disintegration and social disorder. An educa-

tion for today and tomorrow must be an education which prepares people for social changes seen and as yet unforeseen, prepares them not only in terms of skills, but in terms of character, perspective and a personality capable of adapting wholesomely to new situations.

Important and difficult as the education of boys and young men will be in this process of modernization, the education of women will be even more so. The new place of women in a modern democratic society will require that they carry the responsibilities which go with their new rights. Undergirding all such responsibilities will be the social and civic education of the citizen. For some, education should also mean acquiring new productive skills or occupational training which will enable them to contribute both to the economy and to the material well-being of their families. For all it must mean acquiring the knowledge, skills and understandings which will enable them to be good homemakers in a new and rapidly changing environment, homemakers who can provide a healthy physical, intellectual and emotional home for children, homemakers who understand the school and society and who can use the home to share with teachers in the difficult process of education.

In none of its approaches and problems can Nigerian education afford to overlook the rich cultural and artistic heritage and potentiality of Africa. Nations elsewhere in the world that have hearkened to the lures of machine living often awakened only too late to the tragic price they paid in terms of both balanced living and the surrender of creative expression. Having abandoned the foundations of their arts and crafts, they are now frantically trying to reconstitute lost skills on bases which have all but vanished. A truly modern education will never surrender its aesthetic heritage. It will prize it and cherish it. It will build upon it. One the surest indices of the health of the new educational system will be its ability to produce not only a nucleus of creative African writers and artists, but a generation of persons, in all walks of life, who can use their leisure creatively, who take pride in their arts, and who have a sense of identity with their past. Not rootless persons, but self-respecting, creative individuals drawing their nourishment from a soil rich in tradition must be the nation's aim.

But in the last analysis no nation is ever stronger than the individuals who compose it. It is for this reason that the national purpose in education must be forever to produce the kinds of young men and young women of whom it can be proud.

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chapter 2

The Social Context of Education

2-1. What is the underdeveloped world?

"Nearly three quarters of the human race live in countries where dire poverty and deprivation prevail."

PAUL HOFFMAN

The previous chapter suggests that judgments concerning education for modernity for any given society must always be made within the unique context of that particular society. It does not follow, however, that there are no common problems confronting many nations in our time. Through the following statistical report, Paul G. Hoffman clarifies the concept of *underdeveloped* lands. Identifying underdevelopment largely in economic terms, he indicates useful criteria for establishing the magnitude of the underdeveloped portions of the world—largely in Latin America, Africa and Asia, the alternatives facing the inhabitants of these portions of the world, and the urgency of helping them to achieve a more abundant life for themselves and their children. Figures of gross national product and per capita income can help us identify the problem with which we must initially cope. Still, the urgency of the economic problem should not lead us to confuse initial criteria with ultimate criteria for development. Economic development in any nation provides essential indices of status and growth, but their true significance, their significance

for social (human) development, must be measured by the extent to which potential well-being is translated into the actual welfare and development of people.

[Paul Hoffman]

Everyone knows an underdeveloped country when he sees one. It is a country characterized by poverty, with beggars in the cities, and villagers eking out a bare subsistence in the rural areas. It is a country lacking in factories of its own, usually with inadequate supplies of power and light. It usually has insufficient roads and railroads, insufficient government services, poor communications. It has few hospitals, and few institutions of higher learning. Most of its people cannot read or write. In spite of the generally prevailing poverty of the people, it may have isolated islands of wealth, with a few persons living in luxury. Its banking system is poor; small loans have to be obtained through money lenders who are often little better than extortionists. Another striking characteristic of an underdeveloped country is that its exports to other countries usually consist almost entirely of raw materials, ores or fruits or some staple product with possibly a small admixture of luxury handicrafts. Often the extraction or cultivation of these raw material exports is in the hands of foreign companies.

Some of these underdeveloped countries are new. Others of the underdeveloped countries, oddly enough, are among the oldest known to history and were the seats of refined and elaborate cultures while Europe was in a state of barbarism and America was yet undiscovered. In some of these ancient centers of culture, such as India and China, there is reason to believe that the life of the average man is worse than it was centuries ago. Today in these countries population has increased to such an extent that the ancient methods of agriculture and handicraft can no longer provide adequate food and goods to meet even basic needs.

While it is thus fairly simple to tell that a country is underdeveloped, it is not so easy to measure the extent of its underdevelopment or to set up an exact statistical definition of what constitutes underdevelopment.

Paul Hoffmann, *One Hundred Countries: One and One Quarter Billion People* (Washington, D.C.: Albert and Mary Lasker Foundation, 1960), pp. 14-17, 19-23.

Using such statistics as are available, we can arrive at a rough general definition of an underdeveloped country, and get some idea of the number of underdeveloped countries and the extent of their economic problems, but it must be understood that any such generalizations are necessarily somewhat arbitrary. One of the simplest yardsticks for measuring a country's relative development is the average annual per capita income of its citizens. This index is arrived at by taking its total annual income, as revealed through production figures and other data, and dividing it by the number of individuals of all ages and conditions. It is then put in terms of a common currency such as United States dollars. Admittedly, this index does not express the real income of any peoples in any country. Conversion into dollars is not always meaningful. But the indexes of the various countries considered together do give a rough picture of their relative status in terms of economic organization and activity. If you apply the income per capita yardstick, you discover, of course, that the United States and Canada and several of the European countries are at the top of the list with average annual per capita incomes between \$1,000 and \$2,000. We can safely take a \$300 average annual per capita income as the dividing line between the developed and underdeveloped countries. . . . Half of these countries, with a population of 838 millions, (about 70 per cent of the one and one quarter billion people with whom we are here concerned) have an average per capita income of less than \$100 a year.

If an underdeveloped country is to raise its average annual per capita income, it must increase its production and consumption—that is, its workers must produce more food, clothing, shelter, and the other necessities and amenities of life. This means greater output per worker on the farm and in the factory. It means adding mechanical horse power to muscle power. This requires new techniques and increased investment.

By investment we mean the creation of new power supplies, the building of factories, plants and facilities, the development of natural resources, and the training of personnel, which enable a country to produce more. If you want to increase agricultural production, for example, you must have fertilizer, and to make fertilizer you have to have chemical plants, you have to have facilities for extracting phosphates and the other ingredients of fertilizer, you have to have factories to make the bags to put fertilizer in, you have to have roads and carts or trucks to carry the fertilizer to the farms, and you have to have trained clerks, accountants, machinists, chemists, salesmen and ad-

ministrators to guide and control the whole operation. The same thing is true if you want to install an irrigation system, and the process grows even more complicated if you want to make more textiles and clothing or sewing machines or automobiles.

In the developed countries we obtain the money for capital investment through savings. Savings is the money we take out of our day-to-day consumption and lay aside for future use. The richer people get and the more money they make, the larger amounts they can save and the more investment an economy can make. Our savings and investment operations are very complex and involve vast amounts of money; in the United States, for example, investment runs at a rate of about 15 per cent of national income.

In underdeveloped countries it is extremely difficult to build up enough savings to make the needed capital investments. Where people are living from hand to mouth they have nothing they can set aside for the future. If their incomes are increased, they will buy a pair of shoes or a new kettle rather than save. As population increases and the average annual income goes down, the problem of building up savings becomes desperate. Furthermore, many underdeveloped countries do not have an administrative setup for encouraging savings or a sufficient number of educated and trained people to apply the savings to investment and to be sure the money does the job.

For these reasons, underdeveloped countries, if they are to make a start on capital investment, have to get a portion of their savings and their "know-how" from other countries. If with borrowed savings they can create new capital investment and begin to raise the income of their people, then they can begin to save more on their own account and have more to invest in their own expansion, as well as to pay back their borrowings.

Historians are fond of pointing out that this is the way the United States got started. We had a lot of splendid natural resources, but our pioneers, building their subsistence farms on the frontier, were not able to save very much for new investment. They had a hard, hand-to-mouth existence, as we all know. Consequently, some of our greatest capital improvements in the early days of this country came from abroad. Many of our early railroads, for example, were financed by British investors, and British factories supplied the rails and much of the equipment. Many other great improvements in this country were financed by the governments, federal and state. Such projects as the Erie Canal and the dredging and deepening of our rivers to facilitate

commerce were carried on by the government and supported through taxes or other government funds.

This is the traditional free enterprise way by which a new or underdeveloped country gets its start and grows up into the cycle of higher incomes, higher production and increasing savings and investment.

There is, however, another way—one which has been used by dictators, ancient, medieval, and modern—and that is the way of forced savings. It is the way of building up capital by making people work harder and holding down their consumption by state controls. Modern dictators add the new twist of maintaining morale and even building up a measure of enthusiasm for enforced sacrifice through continuous propaganda. In these ways all the increase in production can be devoted to capital investment—to building dams and factories and roads and railroads and the like. It is a ruthless way to do things, but if practiced long enough and rigorously enough, it results in building up sufficient capital investment to enable an underdeveloped country to develop itself with its own resources much faster than would be possible otherwise. But the human cost—to both body and spirit of whole generations—can be frightful.

The issue confronting the underdeveloped countries in these times is which of these two methods of increasing their savings and investments they will use. . . .

Which are the 100 underdeveloped countries?

We can say that there are two billion people on this earth, or nearly three-quarters of the human race, who live in countries where dire poverty and deprivation prevail. However, this total includes Mainland China, which has a population of some 650 millions. Great as the problems of Mainland China are, it is not a member of the United Nations and submits no statistical reports to it, and unless the world political situation changes sharply, it is not likely to cooperate with others nations in a world-wide program of economic development for some time to come; it is attempting to make a "great leap forward" in its own sternly regimented way. The two billion total also includes North Korea and North Vietnam, with a combined population of about 24 millions, which for the same reasons are not likely to be part of a world-wide development program.

The United Nations designates as "less developed" all countries and territories in Africa, North and South America, Asia and Oceania, with

the exception of the Union of South Africa, Canada, the United States, Japan, Australia, and New Zealand," but for reasons indicated above omits Mainland China, North Korea, and North Viet-Nam from its statistical reports. We are here using the United Nations classification and statistics. . . .

The situation of the underdeveloped countries

The underdeveloped countries are no longer content to remain underdeveloped. One very interesting fact is that 22 of the countries, with 800 million people, have achieved political independence in the last 20 years. A good many others are scheduled to obtain independence in the foreseeable future.

This is an index, in the political realm, of the great awakening that is taking place in the underdeveloped areas. Political revolt is only the beginning of a wider and deeper revolt against the indignity of poverty, and political independence provides only the freedom to try to do something about it.

This revolt coincides with dramatic breakthroughs in science and technology which, in the industrially advanced countries, have so increased production and productivity that for the first time in history there is no physical reason for the existence of hunger and elemental human want anywhere on earth.

This good news has been brought by modern science and technology to the peasant knee-deep in his rice paddy, the fisherman on the lagoon, the farmer scratching dry earth with a wooden plow. The forebears of these primitive folk could endure the evils of poverty and ignorance patiently because they had no vision of anything better. But today these men know that hunger, disease, ceaseless toil, and early death are not inevitable, that it is possible to create conditions in which they can live in reasonable comfort and their children grow in knowledge and dignity.

This sudden awakening of three-quarters of the human race holds infinite potentialities for progress. It also has in it the seeds of disaster. If the needs and strivings of these hundreds of millions of people cannot be met, their accumulated frustrations may lead either to anarchy or tyranny, to growing hostility toward the developed nations and to political upheavals which may disrupt and impoverish the world economy and bring on war.

One cannot say now that the pressures of this great awakening are

finding adequate channels. Indeed, the rate of progress for the underdeveloped peoples is distressingly slow. If we do no better in the next ten years than we have done in the last ten years, we may face a critical situation. Let us consider some of the statistical evidence, inadequate as it is.

The 1¼ billion people inhabiting our 100 countries received in 1957 a total income of around \$120 billion, or about \$100 per person. In some countries, as we have pointed out, the average was considerably higher, but in others, and these are by far the largest, the rate was much lower—in India and Pakistan it was around \$60 to \$70 per year.

From 1950 to 1960 these countries did increase their total national income. The estimated annual rate of increase is 3 per cent. But while this was going on, population in these same countries increased at an average annual rate of nearly 2 per cent. The increase in total income was due in part to an increased flow of capital investment and technical and other assistance from the industrialized countries. But as we can see from these figures, all this did not mean much to the average man. The average rate of increase per capita per year was only 1 per cent, and this figures out an increase of \$1.00 per person per year, or a gain of only \$10 per person in ten years.

This is not enough either to make a very substantial difference in living standards or to supply the savings needed for increasing capital development.

We can better understand the significance of this low growth rate in the underdeveloped countries if we contrast it with the rates of growth prevailing in the industrialized countries. These are countries where there is, as we have said, a high rate of investment and saving. Whereas the 1¼ billion people in the less developed countries gained only \$10 per person in ten years, per capita income, in dollars of constant purchasing power, increased by \$225 in the United States between 1950 and 1957, and by over \$200 in the six countries in the European Economic Community.

These increases demonstrate that the higher you are in the economic scale, the faster you grow. In the United States per capita income is over \$2100 per year. If you take the industrially developed countries as a unit—that is, the United States, Canada, Western Europe, the United Kingdom, Australia and New Zealand—you have an annual per capita income of over \$1250 per year. At these high

levels the average rate of increase is much greater than it is at the low level of \$100 per year. . . .

Real per capita income has been rising in the industrialized countries at the rate of about $2\frac{1}{2}$ per cent during the 1950's, and in the less developed countries at a rate of about 1 per cent. Obviously, then, the income gap is widening.

The chief reasons for this trend are fairly obvious. One obvious fact . . . is that population is increasing more rapidly in the less developed countries than in the industrially developed countries. Over the next decade it is expected that the population in the Far East, South Asia, the Middle East and Latin America will increase more than 20 per cent. In the United States and Canada, for example, it will increase less than 15 per cent. The faster the population increases, the more necessary it is to accelerate the rate of economic growth.

Another obvious reason for the growing difference in per capita income is that countries with a high income are able to save more for re-investment. Along with this goes the fact that technical knowledge, and training accumulate in a country at an accelerating rate, with direct effects upon production and income. It is hard to estimate the growth of technology by any statistical yardstick, but it is easy to understand that the more mechanical engineers a country has, the more machines it is likely to produce.

Some observers have given undue emphasis to the growing gap between the richer and the poorer countries. In pointing out the growing discrepancies they have appeared to suggest that world tensions would be reduced if the rate of growth in the richer areas could somehow be slowed down. It is as if they were suggesting that the industrial nations mark time until the underdeveloped countries catch up. Nothing, however, could be farther from the truth or less desirable. . . .

The road to world peace and growing prosperity does not lie in the direction of holding back the development of the industrial countries. It lies in stimulating and accelerating the growth of the underdeveloped countries and of the developed countries as well.

2-2. Rising expectations

"They try to learn their letters and figures with an almost alarming concentration. So much turns on the outcome, so many family ambitions, so many personal hopes."

BARBARA WARD

To this chapter, which attempts to identify several of the major social changes that bear directly on education and to give some idea of the broader dimensions of the problem, Barbara Ward contributes a discussion of the rising expectations taking place in African villages. As she comments, "everywhere the signs of change are there." Some of the signs are obvious, such as the "mammy wagons" and the radios that connect the villages with each other and the outside world. But some of the most significant changes are less obvious and more intangible; for example, the rising demand for school places, the faith in education as a means of achieving higher expectations, and the clear understanding that education will raise these expectations even further. If education is to meet the social demands of changing societies and have the greatest and most positive impact in changing people, it must take into account the barriers and inducements to change that actually are found in the prevailing belief structure, and it must be aware of the relationship of this structure to patterns of action, social institutions, and life goals. Those charged with education and the schools will be ill-equipped to make this contribution if they fail to recognize the pattern of beliefs and motivations implicit in both modern economic society and in those traditional societies now on the road to modernization.

[Barbara Ward]

That the politics of tropical Africa today is marked by a continuous turbulence is not really surprising. Every problem of transition confronts the continent in its most violent form—authoritarian colonial rule has to give way overnight to largely unfamiliar democratic processes; racial attitudes born of superiority and dependence have to be painfully readjusted; tribes must form nations; their leaders must adapt themselves, whether they like it or not, to the pressures of the cold war. It would require super-human wisdom to ride out this upheaval without shipwreck here and there.

Yet, of all the problems of transition, the deepest, the most enduring and probably the most difficult does not lie on the surface of politics. It is to be found at the very foundation of the new states in the effort to take the African village—where 70 or 80 per cent of the peoples of Africa still live—out of its millennial communal and tribal past into the modern world of general education and dynamic farming.

Just how far the village has to go can best be judged not in abstractions but in a concrete image of the village itself. First of all, in spite of tribal differences, in spite of the spectrum of climate and vegetation running from the arid rim of deserts through park-like savannah country to the dense, green, matted walls of the rain forest, the villages have a family resemblance. Mud huts stand in small compounds, roofs and wall tops thatched with straw or sorghum stalks or the big leaves of plantains—with an increasing incursion of stained and rusty corrugated-iron roofing in townships nearer the cities and the ports.

Mud walls, mud compounds, mud underfoot, all baked in the sun or slimy with tropical rain, make the village a splash of chrome or gray in the green ring of shade trees or the all-encompassing green of the forest. At the doors of the huts, women pound millet or Guinea corn or cassava for the family meal while the men sit under the trees and talk and smoke and talk again. Somewhere in the center, hidden behind a thick hedge or laterite wall, is the place of the fetish.

Barbara Ward, "Change Comes to Africa's Villages," *The New York Times Magazine*, November 19, 1961, pp. 24, 49. © 1963 by The New York Times Company. Reprinted by permission.

In Moslem villages, a tiny baked-mud mosque takes its place. The house of the headman or the chief stands out by reason of the extra carving above the lintel of his door or the dignity of a large Victorian armchair in his living room. And in and out of the compounds and the alleyways run little black goats while scraggy, squawking hens peck millet from the dust.

One would say: "This has not changed in half a millennium." But everywhere the signs of change are there. In many of the villages a plain, square, concrete community hall stands upright among the sagging huts. It has been built by the villagers themselves. The market economy is reaching out to them. They have their village stores where women traders conduct transactions which vary from a hundredweight of firewood down to the transfer of a single cigarette.

Imported canned goods are displayed on trestle tables beside wood stoves roasting local plantains—the African equivalent of the hamburger. The "mammy wagons," open trucks using extravagant titles as trademarks ("God Deliver Us," "Never Say Die," "Don't Trust a Lovely Woman") roar up the village street, depositing visitors and taking on a load of passengers and yams for the near-by market. Even if the forest is all around and trees block the view beyond the first turn of the road, the wider world is pouring through and eroding the old isolation.

The economic basis of the village is beginning to change, as well. The starting point is still traditional farming in which the land is held by the cvillage group and no one outside the clan may claim a share (although some tribes are more lenient than others in allowing strangers to rent a temporary strip). Within the group, families have the use of individual holdings and this use, but not any form of ownership, is heritable.

Whether the surrounding area is forest, savannah, or semi-arid land, the farming family's usual practice has been to clear no more than the three or four acres needed for food crops, grow yams and Guinea corn and cassava for four years and then, as the soil's fertility petered out, move on to another four-acre plot, leaving the vegetation to flow back over the old site. In fifteen years or so, the soil is restored.

The system seems confusing to the outside observer. So much land appears not to be in use at all. Forest and farm overlap in ways repugnant to tidy Western concepts. And some aspects are confusing even to the Africans themselves. There are few complete and ade-

quate surveys; endless litigation arises over the delimitation of clan lands. Family plots, fixed by tradition, become unbelievably complex as the family grows and subdivisions occur. A village can become a patch work of interlocking farm and fallow where no farmer can change methods or rotation without the agreement and cooperation of everyone else.

But the system has had signal virtues. Above all, it has kept a vegetable cover over Africa's friable soils and neither tropical rains nor tropical heat has washed or baked the earth into sterility.

The system is also incredibly durable. In fact, it is the special order which man has lived for by far the longest part of his history; civilization is a newcomer compared with a hundred thousand years of tribal life.

Yet change is on the way. Nature may have isolated the African farmer. But it certainly did not deprive him of the power to seize opportunities once he could see them. Wherever new openings entailed only small amounts of capital (no village community can produce massive saving) the farming communities have taken them up with purpose and vigor. Truck gardening is increasing near the cities. Where the growing of cash crops does not demand elaborate organization or plantation lines, the peasant farmers provide the bulk of the crop.

Cocoa in Ghana and Western Nigeria is grown on small farms in the forest. Ninety per cent of Nigeria's palm kernels are picked from wild palms. And there can be little doubt that many more villagers would have entered the timber trade if the initial cost of equipment had not been so high, and if the European middleman had been more ready to help. It is not dour conservatism but lack of capital that keeps the more enterprising farmers from changing the scale of their operations.

But the chief key to change in Africa today lies in the schoolhouse. In more and more of the villages, the passer-by will see a green clearing with a couple of insecure football posts stuck up in the middle and, around it, a square of low mud buildings, white-washed, roofed with thatch or corrugated iron, veranda posts painted black, cannas growing scarlet and yellow in the corners. Here the children in khaki shorts and shirts or tidy mission dresses of butcher blue chatter and race and cheer the passing cars with extravagant gaiety, or sit in the shade frowning over their reading books.

In the dark little classroom they are quiet, attentive scholars. They

try to learn their letters and figures with an almost alarming concentration. So much turns on the outcome, so many family ambitions, so many personal hopes. And they feel the cold breath of failure when their teacher says: "If you don't learn better than that, you'll have to stay on the farm."

2-3. Urbanization

"With perhaps a billion people to be added to the world's nonfarm population what kind of community are the new urbanites likely to find themselves living in?"

CATHERINE BAUER

Some time ago one of the editors of this volume received a letter from a young friend who had completed his primary schooling in a remote village of an underdeveloped land. He wrote, in school-learned phrases reminiscent of another century, that having found no work at home, "I have come to the city to seek my fortune." Recently one of the editors had occasion to seek him out among the overcrowded shacks of the burgeoning metropolis to which he had migrated. As the editor threaded his way past piles of head-high rubbish, assaulted by the stench rising from an over-worked sewage system, he found that the bright façade of the luxury hotels, ministerial palaces, and the modern offices in which the new cities and developing lands take pride had for him lost much of their luster. And yet, as Catherine Bauer points out, it is from the city that "most of the political and economic leadership for national development is likely to come"; it is here that "new values and motivations will take hold; it is these cities that are focal points for change and progress in their countries."

It is clear that the decades ahead promise that the underdeveloped lands will witness a population growth of staggering proportions in urban areas. The issue

joined between those who view the promised disruption and social disorganization as inevitable and temporary and those who see disorganization as "an unreliable tool wherewith to stimulate constructive social change" is as crucial an issue as any the new lands have to face. It is an issue whose resolution, one way or the other, will profoundly alter national budgets and national plans. It is an issue, too, that must profoundly concern educators in new lands. Educators can ill-afford to ignore the magnetic force of city lights, a force that will, for better or worse, shape and condition the ways in which the schooling they have provided will be used or abused in the name of national development.

[Catherine Bauer]

In the potential progress of undeveloped countries, the city plays a dynamic multiple role. Urbanization is a key factor in the race between increased productivity and population growth, because it creates the milieu for modern industry on the one hand and apparently tends to reduce the birth rate on the other. Also, most of the political and economic leadership for national development is likely to come from the urban centers. And finally, cities are where the basic social transformation must usually begin. New values and motivations take hold here, gradually spreading outward into the more conservative hinterland. . . .

With perhaps a billion people to be added to the world's nonfarm population in the next thirty to fifty years, for the most part in presently underdeveloped areas, what kind of community are the new urbanites in these countries likely to find themselves living in?

If present trends are projected, the majority may well be residing in vast metropolitan centers, some of them reaching a size entirely unprecedented. The present major cities in Asia and Latin America already tend to be very large by comparison with those in Europe and the United States at a similar stage in population growth and industrialization. And in recent decades, the biggest cities have been growing far more rapidly than the smaller communities. In the

Catherine Bauer, "The Pattern of Urban and Economic Development: Social Implications," *The Annals of the American Academy of Political and Social Science*, 305 (May, 1956), 60-62, 65-67.

underdeveloped countries, there are almost twice as many people in cities of over 100,000 as there are in communities of 20,000 to 100,000.¹

Of the twenty-five largest cities in the world, according to the latest figures available in 1950, twelve were in Japan, China, India, Africa, and Latin America.² And at least eight additional cities in India and Southeast Asia are rapidly pushing into this category; several of them in fact have probably reached there by now.³ In 1951, India had ten million people in five metropolitan areas, which had increased by 68 per cent since 1941. And the wave of urbanization is just beginning. In 1850, at a roughly comparable stage in the development cycle, the largest city in the United States was New York with only about half a million.

The population of Latin America is expected to double or more in the next thirty years.⁴ And if the proportionate increase in cities of over 100,000 continues as at present, their population will be almost quadrupled in the same period, with a still higher rate for the biggest metropolitan centers.⁵

Clearly, present trends suggest the possibility, at least, of mammoth agglomerations, numbered in the tens of millions.

The urban environment: an insoluble problem

These growing cities are the focal points for change and progress in their countries. New employment opportunities with higher wages tend to develop here; rising social standards and political demands emanate from them; and it is here that most of the housing construction, improvement efforts, and major expenditures for public works are centered.

Yet living conditions for the majority of the population tend to be

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1. See various reports of the Population Commission of the United Nations; also Kingsley Davis and Hilda Gertz Golden, "Urbanization and the Development of Pre-Industrial Areas," *Economic Development and Cultural Change*, Vol. 3, No. 1 (October, 1954), p. 11.
 2. Warren S. Thompson, *Population Problems* (New York, 1953), p. 389.
 3. Census of India, 1951; and D. W. Fryer, "The 'Million' City in Southeast Asia," *Geographical Review*, Vol. 43, No. 4 (October 1953), pp. 474-94.
 4. United Nations, *The Population of South America, 1950-1980*, and *The Population of Central America, 1950-1980*, New York, 1955.
 5. Derived from figures in Pan American Union, *Problems of Housing of Social Interest* (Washington, 1953), p. 33.

very bad, often worse than in the villages because of acute overcrowding, both on the land and inside the dwellings. Densities are frequently fantastic, and one or more families per room is likely to be the general rule for all but the well to do. In some cities, thousands of people are entirely homeless. The most elementary sanitary services are often missing, whether in congested central districts or outlying shack towns. Transportation is inadequate. And local government is weak, lacking essential personnel, power, and financial resources except as intermittently provided by the national or provincial government.

In most cities, real improvements can be found here and there. But by and large they do not keep up with the influx, and over-all conditions are probably getting worse in many respects rather than better, particularly in the largest centers. . . .

Community structure and social progress: two views

No one claims that conditions in the big cities are either good or getting better, by any standards or value system. But one group seems to suggest that the extreme social disruption experienced by peasant in-migrants may be not only inevitable but also necessary for the drastic transformation required. The "cataclysmic" break with traditional habits, values, and ties might clear the way for rapid social reorientation, perforce if not by choice, perhaps first taking hold in the factory rather than in the family.⁶

This theory would seem to accept if not embrace the great city, with or without any feasible improvements. And although fertility is admittedly little understood, the shock treatment theory may be supported by the belief that city size and resulting social disruption might be more significant factors in reducing the birth rate quickly than education, higher wages, or better living standards, all of which are likely to come very slowly.

It would be unfair to suggest that this somewhat neo-Malthusian

6. See Kingsley Davis, "Population and the Further Spread of Industrial Society," *Proceedings of the American Philosophical Society*, Vol. 95, No. 1 (1951), pp. 8-19, and (with Hilda Hertz Golden), "Urbanization and the Development of Pre-Industrial Areas," *Economic Development and Cultural Change*, Vol. 3, No. 1 (October 1954), pp. 6-24; also Bert F. Hoselitz, "The City, the Factory, and Economic Growth," *American Economic Review*, Vol. 45, No. 2 (May 1955), pp. 183, 184.

view is presented as a positive planning philosophy, however. Rather it is an objective interpretation of current trends which assumes their inevitable projection into the future and therefore seeks a rationale for accepting a long period of social disorganization.

But a great deal of current evidence suggests that disorganization may be an unreliable tool wherewith to stimulate constructive social change. Broken or rootless families, mass insecurity, and hopeless overcrowding can produce demoralization, unrest, and perhaps a lowered birth rate. But they provide no incentives for positive social adaptation, and they tend to keep workers inefficient and productivity low.⁷

More action-oriented, the other group would mainly argue that there ought to be a pleasanter, safer, and surer way to achieve the necessary social transformation in the present state of our knowledge. By this group it is assumed that current trends and conditions may be consciously modified and new motivations nurtured. Tangible incentives and "new patterns of expectations" with some degree of cultural continuity are held to be the primary need, rather than maximum social disruption, in order to overcome the apathy so prevalent in many poor countries.⁸

The essential problem from this point of view is how to translate limited economic gains into recognized social benefits, however modest, as quickly and cheaply as possible, while at the same time fostering a greater sense of responsible popular participation in the development and improvement process. This approach leads to intensive work on the specific needs and possibilities within a given area and is largely responsible for the current programs of self-help village improvement.⁹

Basic to the problem is also the question of how to temper the "social costs" involved in transforming an ancient static society into a modern industrial democracy, including the heavy sacrifices usually incurred in rapid urbanization. For this purpose the great city has

7. See Robert I. Crane, "Urbanism in India," *American Journal of Sociology*, Vol. 60, No. 5 (March 1955), p. 467.

8. See, for instance, George A. Theodorson, "Acceptance of Industrialization and Its Attendant Consequences for the Social Patterns of Non-Western Societies," *American Sociological Review*, Vol. 18, No. 5 (October 1953), especially pp. 480 and 483.

9. The literature in this field is increasingly voluminous, but the general principles are emphasized in *Programme of Concerted Practical Action in the Social Field of the United Nations and Specialized Agencies* (United Nations 1953), pp. 165-66 and *passim*.

many inherent disadvantages, not only in terms of bad living conditions and high improvement costs but also in its disintegrating social effects and the frustration of individual and group initiative.

Obviously, such a diagnosis supports the desire for a greater degree of urban and industrial decentralization in one form or another.¹⁰ But thus far the recommendations and experiments in this field have had little effect on over-all development patterns. And whether or not a determined national policy could accomplish such decentralization is still an open question.

2-4. Technology

"The story of the impact of technology on education makes dismal reading."

K. MOTWANI

The previous selection stressed the impact of urbanization upon people of the developing lands. In the following selection K. Motwani delineates the far-ranging impact of another force, technological innovation. The central role of the technology and means of production in any society need not be labored. What does need to be recognized, however, is that changes in a basic means of production, transportation, and communication may, and often do, have repercussions throughout the entire social fabric; they may, in fact, tear that fabric asunder.

That technology has an all-pervading impact and influence on traditional societies is here explicitly demonstrated by K. Motwani. His view is that of an Indian educator. It is one frequently shared by other educated

10. An interesting analysis of the economic and social factors in development in relation to the pattern of industrialization and urbanization has been made by Wilbert E. Moore, "Problems of Timing, Balance and Priorities in Development Measures," *Economic Development and Cultural Change*, Vol. 2, No. 4 (January 1954), pp. 239-48.

Asians, one not overly enamored of technological change. Motwani severely indicts modernization and its many attendant social problems. His statement demands reflection by thoughtful educators everywhere, for his catalog of social ills that are transmitted along with technological change is as relevant to modern as to the developing nations. The concerted efforts of educators from both cultures may bring them closer to solutions of their common problems.

To find comprehensive solutions is not easy. In periods characterized by social disorganization and confusion as here described, the conservative frequently harks back to reinforcing old traditions, old standards, old ways—failing to recognize that it is the inapplicability of these very standards to new conditions that is at the root of the disorganization. As a crucial instrument for implementing social policy, the school must likewise examine its role or roles. National and professional leaders alike must face resolutely such problems as developing in the young a new and appropriate sense of authority and responsibility, an imaginative and rational spirit of initiative and entrepreneurship, and the qualities of internal stability and creative intelligence that will permit them to cope with the accelerating consequences of technological change. The need for such qualities in the citizens of developing nations is most clearly underscored in the selection that follows.

[K. Motwani]

Asia is one, and in Asia it was India that set the seal of her social and cultural attainments on the various Asian countries and gave a certain homogeneity to their cultures. Her earliest contributions to various sciences—medicine, music and dancing, archery, military science, mathematics, architecture, grammar, phonetics, etymology, ritual, astronomy and astrology—recorded in her early Sanskrit literature, such as the Vedas, Upa Vedas and Vedangas, all now available

Motwani, "The Impact of Modern Technology on the Social Structures of South East Asia," *Social Change and Economic Development*, ed. Jean Meynaud (Paris: UNESCO, 1963), pp. 99–104, 108.

in English translations,¹ were woven into her psychological, philosophical and sociological thought. On the foundation of this knowledge, India raised a superstructure of social institutions. All this knowledge of sciences and arts, of religious and philosophical thought, and of social ideals and organization, India shared generously with the various countries of Asia and Europe. Every country of Asia, excepting Russia, but including ancient Sumeria, Babylon, Ninevah, Crete, Egypt, Greece and Rome came under India's cultural influence.² The vitriolic touch of modern science has no doubt erased the marks of India's cultural contribution to the West,³ but the evidence of her impact on the whole of Asia is abundant. This all-pervasive influence of India established through the spread of her institutions, ideologies and people, sometimes reinforced by political predominance, imparted homogeneity to the cultural pattern of this region. To be sure, there were variations due to environmental and ethnological factors and historical influences but, in the main, there was one homogeneous culture-pattern in all these countries before modern technology entered the arena. It is in terms of this common cultural ancestry and view of life that changes brought about by modern technology have to be assessed and understood.

The earliest creations of modern technology, which initiated the era of social change in South-East Asia, were the means of communication, such as railways, ships and telegraph; telephone, wireless, radio, cinema, newspaper and literature came later. These mechanisms of

1. For references on this subject, see standard works such as *Sciences of Ancient India*, by Sir B. N. Seal, *History of Hindu Chemistry*, by Sir P. C. Ray, *Positive Background of Hindu Sociology*, by B. K. Sarkar. The author of this paper has dealt with the sociological implications of these scientific contributions of India in his *Science and Society in India*, a series of lectures delivered to the various universities of India under the auspices of the Indian Science Congress Association, in 1944.

2. The publications of the Greater India Society, organized under the patronage of the late Rabindranath Tagore, deal exhaustively with India's impact on the East and South-East Asia. Professor R. C. Mazumdar, former Vice-Chancellor of Dacca University, has summarized the available material in a compact, interesting manner in the course of his Sain Das Memorial Lectures, 1940. Sir James Tennent gives an interesting account of the knowledge of sciences and arts existing in ancient Ceylon, taken from India, see his *Ceylon*, 1860.

3. A fuller treatment of this subject will be found in *Message of Plato*, by Professor E. J. Urwich, former Chairman of Sir Ratan Tata Chair of Social Sciences in London University, *Our Oriental Heritage*, by Will Durant and in *Eastern Religions and Western Thought*, by Sir S. Radhakrishnan.

rapid communication and locomotion offered facilities for travel and opened up a two-way traffic, commercial and cultural, between the West and Asia. The European countries, such as Britain, France, Holland and Germany, which were already engaged in traffic with the East since the sixteenth century, fought among themselves for mastery of the seas and control of trade, and with the exception of Germany, succeeded in carving out empires in South-East (excepting Siam, whose independence was more apparent than real since it was intended to serve as a buffer between the conflicting interests established in Burma and Malaya on one side and Indochina on the other). The railways, for instance, started an unending series of social changes in every country. The steel tracks cut across the countryside, disturbed the agrarian configuration, caused water-logging which, in turn, gave birth to malaria and other diseases. The railways introduced machine-made goods from the West, which pushed out local products from the market, crushing indigenous industries, robbing the peasant proprietors and hereditary craftsmen of their work and sources of livelihood, reducing them to the status of wage-earners. The railways accelerated the tempo of travel and social contacts; the various castes and classes travelled together on equal terms and the social distances between them maintained by tradition and custom began to diminish. The isolated, static societies of Asia were confronted with a challenge and their crystallized attitudes and stratification began to take wing. Thus, the railway alone may be said to have brought about a social revolution in this region affecting their modes of travel, agricultural setting, industries, employment, health, social attitudes and structures. The spatial and social distances began to disappear; the process of communication which, as Professor Cooley says, is the heart and soul of social change, became accelerated. But the various technological inventions, mentioned above, reinforced each other, giving a scientific temper to the minds and thought of the South-East Asian people, affecting vitally every phase of their lives.

The birth of technology in the Western countries had produced similar changes in their social structures. Their agricultural self-sufficient economy was quickly transformed into an industrial, commercial and exporting economy. The gaping jaws of the machine had to be continuously fed with the raw materials imported from outside; therefore, the major interest of the Western rulers in their tropical possessions was economic. Natural resources and agricultural and animal products of certain types became their main concern. Mining

of coal, iron, silver, gold, mica, tin, petroleum, etc., commenced on a large scale. These 'robber industries', which took from the earth but gave back nothing, became highly organized. In the field of agriculture, emphasis was placed on production and export, not local consumption. Coffee, copra, cotton, rice, rubber, sugar, tea and wool became the major agricultural industries of South-East Asia, resulting in unbalanced, undiversified economies. A considerably enhanced demand for these commodities resulted in feverish haste of production. Millions of acres of jungle were cleared; steadily expanding industrialization at home and in the metropolitan countries, development of railways which required timber for tracks and for steam-power, laid a heavy toll on forest reserves. Deforestation resulted in soil erosion, silting of rivers, interference with the hydrological cycle, the lowering of the fertility of the soil and deterioration of the health of the people.

Production for export and profit substituted competition for co-operation, individual ownership for communal and village ownership, money economy for barter and created the money-lender and the so-called 'economic man'. The impersonal and uncontrolled forces released by technology sucked both the proprietor and the producer into their orbit and affected the attitudes and relationships of both towards each other. Instead of being joint owners of means of production and producers and consumers of goods themselves, they became agents of competitive production for foreign markets, and since payment was made in money, everything came to have a money value. Taxes and wages were now paid with money, while formerly service for taxes and food and shelter in place of wages had sufficed. But now, land revenue for a top-heavy alien administration forced the producer to resort to the money-lender who kept him pressed down to the starvation level.

The village which was the basic economic and cultural unit of these people came under the disrupting forces of technology. Its self-sufficiency disappeared and it became tied up with the city, the nation, and the outside world. Village industries, such as spinning and weaving, pottery, brassware, oil pressing, vegetable dyes, lacquer work, etc., languished; machine-made goods, such as aluminum wares, kerosene, textiles and synthetic dyes took their place. A superfluity of cheap manufactures displaced the craftsman, depriving the group of his hereditary skill. The rooting of the farmer to his soil and of the craftsman to his hereditary calling had produced a sense of social solidarity, an *esprit de corps*. But with the disruption of the ecological balance, all this disappeared, rendering the populace mobile, restless, shiftless.

The village, which was formerly a family, became transformed into an adjunct of factory, a mob. . . .

In the pre-industrial era, the stability of the social organization was maintained by custom and status; these together regulated prices, wages, rents and land taxes, thus holding individualism and exploitation under leash. Now free competition has replaced custom and status, has torn the villager from his family, caste and craft, and made him a physical, emotional and spiritual nomad. Corporate life was weakened; the family and caste lost control over him and no longer determined his status; self-interest and pursuit of wealth became the mainsprings of his action. Labour became mobile, wages and profits became elastic; they were all linked up with the fluctuating fortunes of the stock exchange and commodity markets of London, Paris and The Hague.

This process of liberating the individual affected the family institution. With the upsetting of the rural life and the land-man ratio, the cityward migration became rapidly augmented. The joint family system started breaking down. The social virtues fostered by the family began to disappear, while neglect of the unfortunate members, such as the aged, the widows, orphans and disabled, made organized social welfare and security legislation an urgent necessity. Science has affected sanctity of marriage; pre-marital relations, abortions and divorce have made their appearance. The modern cinema, a creation of science, has put virtue on the defence; its glorification of glamour and seductive arts have entered every home and the models of virtue and character are no longer heroes and heroines of the ancient religious epics, but actors and actresses of the modern screen. . . .

The story of the impact of technology on education makes dismal reading. The demands of technology showed scant regard for the spiritual and cultural attainments of these people; Macaulay did not consider all the religious, philosophical and scientific literature of India worth one shelf of books of European literature. The whole upbringing of the subject peoples was supposed to prepare them for the next world, while the rulers wanted to train them to live here and now, to produce more, to adopt Western ways of life, to learn their business techniques. The integral character of their knowledge and culture was ignored and one-sided education, reflecting the economic, political and industrial needs and evolution of Europe, was imposed on them. The rulers devise various ways to gain their objects and technology came to their aid. The printing press made it easy for them to produce

at low prices and for extensive use books dealing with their countries. In this literature, they went in for wholesale glorification of their countries and their culture and vilification of those of their subjects. Western geography, history, literature and economic, political and religious doctrines, quite unrelated to the needs and experience of the student, were pushed down his throat, involving considerable effort of memorization. Demand for mastery of the rulers' languages added to the strain and education degenerated into propaganda, a powerful instrument in the hands of the rulers to effect and reinforce social changes that accompanied the advent of technology.

The rulers put a premium on education received in their metropolitan countries. Thousands of young men and women went from this region to the West, costing their countries thousands of millions of rupees and, on their return, they became cultural outposts or salesmen of the products of their rulers' countries. Reared in a technological milieu, they became enthusiastic about the Western institutions and ideologies *en bloc* and, on entering public administration, carried out policies of their rulers, introducing the Western outlook into education, medicine, law, arts and sciences, far more effectively influencing their own people in the direction of new ways of life than their Western colleagues. . . .

But there is a bright side to this sombre picture. Life fulfills itself even through failures. The evil effects of the impact of technology have been offset, to some extent, by bands of eminent scholars and scientists in the metropolitan countries who have organized Royal or National Societies and Academies for the study of various phases of culture of their dependencies. They mastered Asian languages, ancient and modern, wrote their grammars and compiled their dictionaries, translated the sacred books of the East in European languages and published them, thus interpreting the best of Asia to its inheritors and their own people. Some highly-placed officials, stung by the injustices of their governments, resigned their positions, embraced poverty and dedicated their lives to the educational, social, political and spiritual uplift of the people. The Indian National Congress was organized and nurtured into maturity by the indefatigable labours of Englishmen. . . .

Technology has brought world-view to these South-East Asian nations. They are members of numerous world organizations, partners in a world fellowship. This association in the world drama is helping them to cut down trial-and-error method in the various phases of their

development. Reconstruction of ancient tanks, preservation of ancient monuments, reclamation of land long forgotten or abandoned to the jungle, sublime interpretation of art and literature, restoration of national traditions through schools of art and above all the language of the rulers in place of their dialects are some of the contributions made possible by the industrious and unselfish application of thousands of officials and non-officials from the West. Technology has brought rich treasures of the Western culture within easy reach of the common man here. The best of Europe's literature, drama, music, painting, sculpture, architecture and science is at his disposal and he is now the inheritor, not of the life of his village, district or nation, but of the world.

Technology has brought the soul of Asia face to face with the soul of the West and in the acknowledgment of their complementary character lies the hope and salvation of mankind.

2-5. Agriculture

"With present methods of cultivation and the rapid increase of populations the areas of good arable land are reaching the saturation points in many countries."

DONALD K. FARIS

The very nature of development is such that in many lands it must in large part be characterized by the growth of industry and industrialization. This should not blind one to the fact that in the foreseeable future, in most of the underdeveloped lands, the vast majority of the people will rely upon agriculture for their livelihood. Although this portion of the population may indirectly benefit from industrial growth, significant improvement in their level of living—real development for them—must come through agrarian reform. In the following selection Donald K. Faris stresses not only the many elements that a program of agrarian reform

might encompass but also the interrelatedness of these elements.

Experience indicates the inadequacy of attempts to solve the agrarian problem through agricultural education without accompanying attention to problems of land tenure and tradition. Changes in land tenure systems without changes in knowledge and attitudes through education may prove equally abortive. Newer attempts that tie agricultural schools directly to land resettlement schemes or to other plans that assure graduates adequate private or cooperative holdings to put their learning to use, recognize the essential relationship between agricultural education and land tenure. Certainly any theory of development, or of the role of education in development, will prove inadequate if it is not "conceived in terms of constructive sociology, aiming at an all-round improvement of the life of the villager." Agricultural change and educational change must go hand in hand.

[Donald K. Faris]

I

Old Man Peasant squatted in the shade of a small thorn tree in a corner of his field, waiting for his wife to bring him a drink of water. Younger son was with him and it was a good and pleasant thing that he loved the land, lame though he was. Old Man Peasant scooped up a handful of warm earth and let it slip through his fingers. Of a sudden all his senses had a million eyes and ears as though some stinging magic had been mixed into that bit of soil. He grew tense, aware. He could hear the grass growing and time walk by. He could see the breeze run its hand over the young green shoots in his paddy and the grain bending beneath the touch. For his labor this plot of land would surely give return this year.

To be sure, Old Man Peasant knew this land belonged to another. That was what he knew in one part of him; but in another part of him he knew it as his, for he and the earth he worked were one. He knew too that one day he would, even before the law, own his land again.

But it was a hope ever mixed with uneasiness, his mind forever leaping from doubt to doubt: fear of drought, of locusts, of sudden storm—fear of hunger.

The next day hope became something more than a blur in his mind. Old Man Peasant heard that the great landowners were being told to sell their land to those who cultivated it, on easy terms too; and in the end the landowners would be allowed to keep only as much land as they and their families could work. As soon as he found the word was true, the strength of his youth took hold of his limbs and, even though he had lost many days from the fever that returned every third evening and left him weak in the morning, he managed to work from dark to dark. He found extra work for his hands on the rainy days, the woman his wife and the children all helping. At night he would dream he was making his first downpayment. On payday his imagination swelled big. If the harvest were good he could make a payment. He could see himself and not his master's agent dividing the good grain. Measure by measure he was counting and piling it up—one portion for seed, one to buy fertilizer, one for the hire of the animal, five for the payment on the land, two for the family's food. . . .

II

A Nigerian chief spoke the mind of much of the less developed portion of the world when he said: "I conceive that land belongs to a vast family, of which many are dead, few are living and countless numbers are still unborn." Chester Bowles, in *Ambassador's Report*, puts it this way: "I have come to believe that the key to an understanding of Asian villagers is a special reverent concept of land as the source of all wealth and goodness, which those who till the land on every continent seem to have in common."

In industrial countries the modern machine is responsible for dividing us from this concept; and yet it is one of the most potent factors influencing behavior in the less developed areas, and must be understood if we are to find creative answers to the agrarian question.

With present methods of cultivation and the rapid increase of populations the areas of good arable land are reaching the saturation point in many countries. It is true that the limits of such land have widened some, but very slowly, while populations have climbed rapidly. In the India of 1872, for example, about 56 per cent of the 200 million population, or 112 million, were dependent on the land. In 1950, with a

population of 358 million, the percentage had gone up to 73, or 261 million. Thus, while the total population expanded 75 per cent in eighty years, the pressure on the land increased 115 per cent. Similar conditions are found in Pakistan, Egypt, Japan, China, Korea, Indonesia, among other countries.

Inevitably farmers have been forced to divide and subdivide their holdings over a period of generations until countless millions now possess mere fragments of land. Deeper poverty for the expanding population has meant greater exploitation at the hands of unscrupulous moneylenders and landlords. To a large degree, this state of affairs continued unchecked until after World War II, when the world awakened to the effects of feudalism in many of the less developed countries. Then, when the slogan "Land to the tiller!" came to life, agitators immediately began to exploit the situation, making the most of people's misery to stir up resentment.

The plight of the landless has scarcely begun to penetrate Western thinking. Take, for instance, a typical farmer in Iran. He is attempting to support a family of five on the produce of two acres which he has rented. One-fifth of the yield goes for seed; one-fifth for water; one-fifth for the loan of oxen; one-fifth for rent; the remaining fifth for himself. His family of five—no more can survive—slowly starves on one-fifth of the returns from the land, which is his total income. Moreover, any time it so suits the landlord's whim the farmer may be turned off the land altogether.

Anyone who has stood on threshing floors in such countries and watched the division of grain between landlord and tenant has seen the landlord take anywhere from 50 to 70 per cent of the total crop: five or seven bags (about 200 pounds each) for himself, and five for three for the man who had not only toiled but had often supplied the seed and fertilizer.

Chester Bowles describes a visit to some Indian villages in the Madras area, where he found the villagers living in one- and two-room huts. Thirty-five per cent of the agricultural population had no land at all. The village headman in one community, in commenting on the situation, said:

"We must pay the cost of cultivation ourselves, and then give 70 or 80 per cent of the crop to the owner, who spends his income in the city." Another farmer said that the villagers had only the value of about 10 per cent of the crop left over after expenses. . . .

Before going to Asia I had read much about the impoverished conditions of the peasants who work the land, and the evils of the land systems under which most crops are produced. After firsthand study throughout all of non-Communist Asia I am convinced that the breaking up of huge land holdings is the single most urgently needed reform in most Asian countries.

... Land reform has taken on various patterns since the possibility was first mooted, the most obvious showing up in a ruthless division of holdings—the landlord as a general rule being stripped of his land without recompense, and often losing his life to boot. Russia supplies the outstanding example of this practice, with China following a similar line. In many instances the loss of the landlord has been unfortunate for the country, for often he was a leader in the community; generally he was educated. Under Communist pressure, accusation against him, true or false, brought into an emotion-charged public trial has often resulted in his liquidation.

Apart from the fact that uncounted numbers of valuable citizens have thus paid for their hereditary holdings with their lives, this kind of reform generates new problems. Land has been divided indiscriminately and some of it has fallen back into the hands of the very farmers who lost it in the first place because they were unable to manage it. On the other hand, many former tenants who have no experience in management, or farm hands who do not have a proper understanding of agricultural practices, suddenly have a gift packet thrust at them. Naturally, they are ill-prepared to use the land well. Efficiently run larger holdings have been broken up into small, inefficient farms with less efficient operators. Moreover, large numbers of the new owners, whose family increase was formerly controlled by the amount of food available, suddenly find themselves with more food and hence more children surviving. At the same time some of the better-off, who had more land before the division and could therefore afford to give their children a chance in life, are reduced to a bare sustenance.

Japan's land reform has been of a semiforce, semidemocratic nature, carried out in the name of freedom. Following World War II, the American military government encouraged the Japanese government to institute extensive reforms. The land was not confiscated; instead, the landlord received bonds in return for the portion he must give up.

Unfortunately, because of sweeping inflation, these bonds soon depreciated to about one-thirtieth their original value. Although unintentional, this action approached confiscation and as such worked hardship on the landowners.

From the land worker's point of view, however, the turnover was a success. By 1953, 92 per cent of the villagers owned their land. At all events, the landlords were spared and the farmers, practically all of whom were already literate, are now in a much better position to turn their opportunity to advantage. One of the consequences of multiplying the number of landowning peasants has been to create a stable middle-of-the-road class who are strong opponents of the Communist ideology.

As for other countries, the reforms have been designed in most cases to serve a double purpose: to protect private capital and at the same time to curb more glaring abuses. In some places the landlord class has been able to block almost all reform, as in certain states in India. In still other instances laws have been passed that provide significant protection for the tenant, who formerly could be turned off the land at the whim of the landlord. Many of these laws, however, have not been long in existence, and the actual aid that has reached down to the farmers cannot be large. In other territories, such as Syria, the common form of tenure is the large estate cultivated by tenants and many sharecroppers who exist within a minimum of protection.

In framing a policy of land reform several factors need to be taken into consideration; otherwise any significant gains that might result can be dissipated. Experience is showing that wide fragmentation of land in itself often lowers the efficiency of operation and may cut down over-all national yields. For example, after the Japanese landlords had left Korea and the land was returned to Korean small farmers, the methods of rice cultivation in some areas deteriorated. Orchards received less care, and the first-class marketable fruit was reported to have dropped from 75 to 25 per cent in some sections. The use of fertilizer was haphazard: in some places, where it was available, too much was used or was applied wrongly, while the total area which had been green-manured dropped by 90 per cent. War conditions were responsible for some of these depletions, but division of land and cultivation by untrained people accounted for a larger amount. There is still another possible outcome of wide equal distribu-

tion of land without accompanying reforms: farmers are tied to the land without any means of effectively mobilizing savings to reinvest in agricultural development, much less in industry.

It has become plain that redistribution of land cannot be separated from other vital factors—security of tenure, the position of the landless, credit, indebtedness, marketing, and the like. Reforms in these related questions also are essential if the productivity of agriculture as a whole and the welfare of the individual farmer are to be improved.

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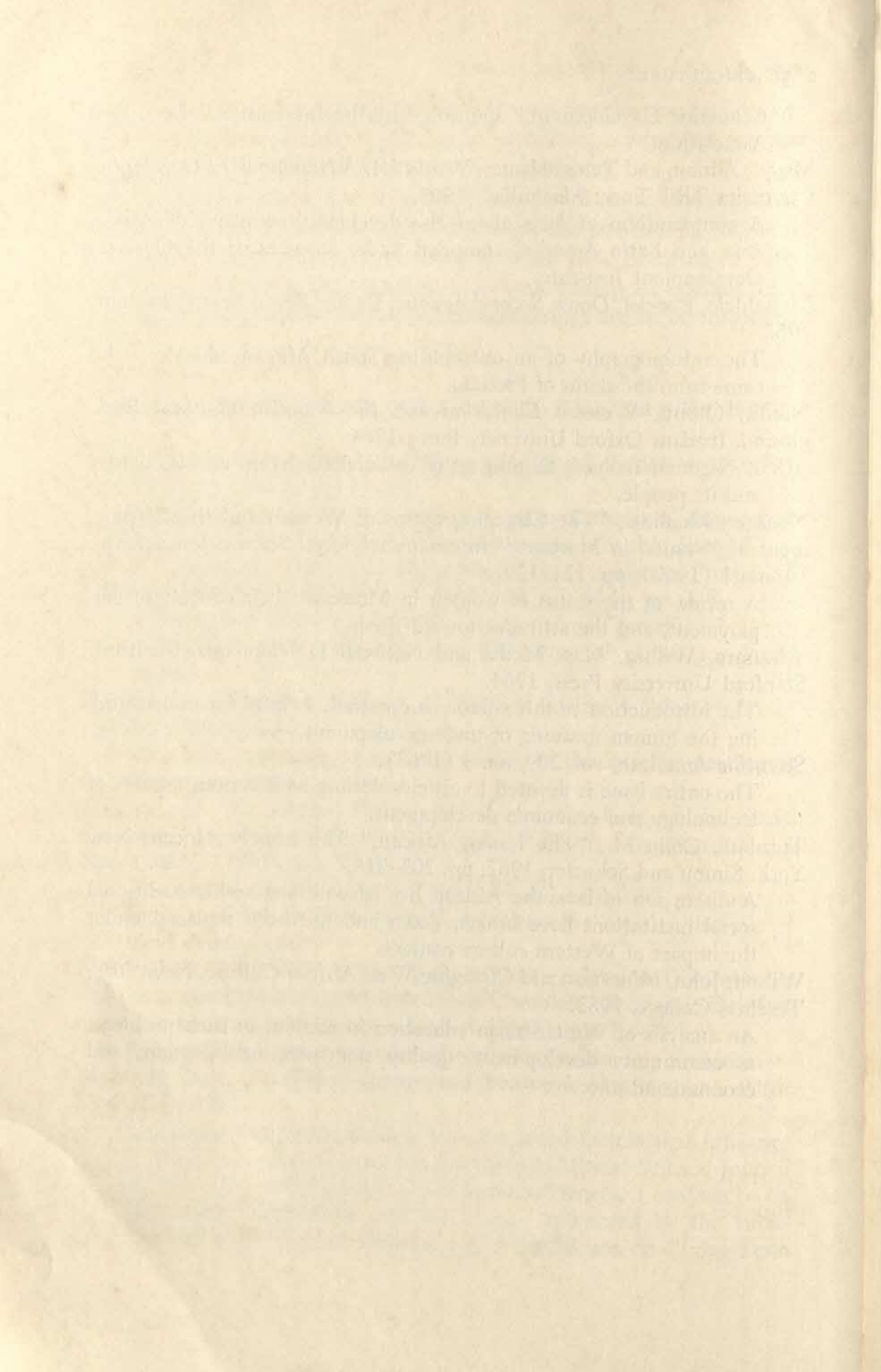
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part two

EDUCATION FOR DEVELOPMENT: THE ETHICAL ISSUES

One cannot view the educational endeavors of modernizing nations without becoming increasingly aware that educational decisions are at heart moral or ethical decisions. The educational institution, of all institutions, is concerned with the shaping of men, with molding their characters, their abilities, and their ideas in such ways that they become desired members of some society. Other institutions have similar effects upon the character of men, and indeed it would be difficult to find many human institutions that do not, but education is remarkable in that this forming and molding function is its central goal. Even as education helps shape individual men and women, so, too, it helps shape society. Always *implicit* in education is some conception of what makes up the good life and the good society.

In human history the ways of living that have been thought good and the types of individuals that education has attempted to produce have varied widely. The very education that would produce a young ox-driver on the Punjab plain, content only to drive

oxen in endless rounds, or a resigned fisherman, breast-deep in a lethargic tropical river, content only to mind his age-old traps, is apt to be the kind of an education that will effectively prevent realization of dreams of modernization. Such education cannot help build industrial complexes, harness new sources of power and energy, or create the national images, which are dreamed of in capitals at Rawalpindi, Conakry, or Brasilia. Whenever we seriously consider education in new lands, we must be seriously concerned about its human consequences. Whenever we judge its merit, we must be concerned not only with its instrumental efficiency in producing the type of society that some or all of its citizens think desirable but also, and more basic, with the adequacy of their conception of the desirable. Particularly we must be concerned with whether decisions reached have been based on knowledge and an awareness of alternatives which are available. Terms such as *modernization* and *development*, as they are currently used, carry with them an aura of rightness that may too easily mask the very issues they create.

In some times and some places the story of education has been one of conserving or perpetuating intact what man has already created. This is the essentially conservative conception of education. Where it is held, schools (controlled often by those benefiting from or desiring to retain the status quo) can serve as effective shelters against the winds of change. In other times and other places man has been primarily concerned with using the educational system as a means of social change, as an instrument whereby new social patterns are built and new lives created. When schools so conceived have operated alongside other social institutions similarly dedicated or committed to change, they have often been remarkably effective in creating social revolutions. This is the corresponding progressive or reconstructive conception of education. But in most times, and in most places, neither men in general nor educators in particular have been this clear about the relative claims of tradition and change; and the programs which have evolved represent amalgams of the old and the new, amalgams that hopefully retain the best of the old even as they incorporate the new.

Certainly one of the most arresting features of the educational

scene in many of the less economically privileged portions of the world is the confrontation of various conservative forces in education with forces that are directed toward promoting change. In new nation after new nation, the quiet, massive forces of traditionalism face the frequently articulate forces of modernity. It is not surprising that this confrontation should also take place in the educational arena where it raises a plethora of educational problems and dilemmas. Wherever the legacy of colonialism and missionary zeal exists, the complexity is compounded, for the forces of change introduced by that legacy have already, in part at least, become suspect by the new elites that it helped to create.

Although today the educational systems that developed under colonialism often appear conservative and resistant to change, they represent simply an arrested stage of the modernization process. In most of the nations of the modernizing world, the process of cultural transition through formal education was initiated in the colonial period. Here education made a major contribution in transforming the "colonial" into a person who, in a unique way and often in a subordinate role, was oriented toward one or another variation of the European conception of civilization. In this respect the success of various educational systems created in or transplanted on colonial soil varied widely. Thus the problem of educational reconstruction in new lands is often not one of the confrontation of modern, Western education with traditional, indigenous education but one far more subtle of altering educational systems designed to shape individuals for one type of relationship with modernity into educational systems designed to produce individuals who stand in a radically different relationship with it. What is sought is a process of *democratic social reconstruction through education*, a process clarified in the selections by John Dewey and Theodore Brameld, which conclude this part.

Any process of social reconstruction or deliberate social change is achieved only at a price. The very complexity of the web of relationships that characterizes any human society makes it clear that a few changes in human ways fail to have ramifications for all the relationships they involve; few strands of the social fabric are independent of other strands in it. Education that teaches peasant children to read and write may lead to a rural-

urban migration that destroys the vitality of the very farming communities it hoped to serve. An education that creates the intellectual independence necessary for modernization may coincidentally create a moral vacuum in which existing moral authority corrodes. As Barbara Ward so clearly indicates in the first selection in this part, few of the changes that must be made in the name of modernity or progress may be viewed as unmitigated blessings, as harbingers of *better*, and not only *different*, days for the participants in change. Any worthy education for modernization must consequently take into account not only the specific goals sought but also those wider social consequences that might, if not recognized and countervailed, vitiate changes made in the very name of progress. A deep moral concern for all such consequences must be a part of any adequate philosophy of education for development.

Fortunately education is seldom an either/or proposition. We are not limited to one choice between one "old" and one "new." There are many roads that may be followed. Choice exists not only as an opportunity but as an imperative. Both those within developing nations who guide their educational destinies and those from modern lands who offer aid bear responsibility for these choices and for their consequences. The choices that will be made, the choices that must be made, make the enterprise a significant moral challenge. In any such enterprise it is only appropriate that all concerned ask themselves, as do the authors of the selections that constitute this part, not only *By what right, change?* but equally, *What change is right?*

These practical, ethical questions are, in a sense, what this book is all about, for the solution of problems rests not only merely upon identifying individually worthy goals but upon hard, probabilistic reasoning and balancing—reasoning and balancing that takes into account the best empirical knowledge we have available or can discover. The responsibility for such thinking rests upon educational leaders in modernizing lands. It rests also upon those in more economically privileged lands who offer them aid and counsel. For us, the latter, the questions most frequently raised are not questions of ultimate decision but the equally strategic questions of how we can assist those making ultimate decisions to become aware of all the information and alternatives available, and perhaps also questions of deter-

mining which forces, goals, and programs we shall in fact aid and which we shall, by failure to support or by dissuasion, discourage. Making such decisions responsibly is what is meant by implementing a philosophy of development. The basic moral questions relating to the welfare of individuals are implicit in all these decisions. If our educational endeavors are in the long run to be as helpful and significant as possible we must sooner rather than later come to terms with such questions as the following:

On what grounds should we institute, encourage, or support educational change in modernizing lands? Should it be on the basis of their goals or ours, upon their own experience or ours? From which disciplines should the necessary knowledge and skills be drawn?

How can we mitigate the untoward consequences of the very changes we support? How can we use our knowledge and experience, if indeed we can, to assure the benefits of old strengths even as we seek the blessings of new ways?

How should we determine which goals are *most* worthy of achievement, which are mutually compatible? How do we avoid confusing mere change with progress?

And for those of democratic persuasion, how do we assure that the benefits of change are, in fact, not reserved for the few but extended to the many?

Although it is true that in one sense this entire book provides the groundwork for formulating answers to such questions, this part in particular is devoted to clearing away some of the underbrush so that they may be seen more clearly. It attempts to do so through the reflections of persons who have experienced or witnessed profound social changes and have consciously and explicitly reflected on the moral problems these changes pose for education. In short, the selections that follow present the thoughts of persons who have been deeply concerned not merely with concepts of increased economic or political efficiency but also with the fundamental amelioration of the human condition in the new world that even now is in the process of creation.

chapter 3

The Diminishing Pursuit of Happiness

3-1. Will they lose the secret of self-fulfillment?

"The answers of the modern world to the pursuit of happiness will differ decisively from those given in traditional societies."

BARBARA WARD

If we ask about the rightness of development or modernization, about the grounds on which we judge it wise to assist less developed lands to assume the characteristics of the more "advanced" nations of the Western world, the answers we receive range in their concerns from our own enlightened self-interest to our responsibility to our fellow man. But certainly any sound moral argument that could be advanced for assisting in the modernization process must rest in large measure upon the conviction that it will in the long run contribute to a better life for the many whose lives it will affect. The fact that all men have not always agreed upon the specific features of what constitutes a good life need not deter us in assessing the claims of modernization in promoting such a life according to those broad features that have widely claimed the allegiance of men. In the following selection, Barbara Ward, an economist with experience in both Africa and Asia, assesses the contributions and costs of moderniza-

tion in terms of three pervasive goals of organized, democratic society—namely, the protection and enhancement of *life, liberty, and the pursuit of happiness*. Recognizing that modernization is unquestionably preserving physical life in new lands, she is nonetheless struck by the fundamental distinction that must be made between *living* and *living well*, a distinction that became apparent to her in considering the ways of life in various underdeveloped and modernizing communities. It may well be that such needs as those for a sense of dedication and purpose, a feeling of belonging, and the expression of joy and spontaneity grow out of our very human nature. Certainly we can agree with Barbara Ward that using the new tool of material plenty to achieve these humane ends remains a significant challenge in the world today.

[Barbara Ward]

For anyone who has spent many years traveling backward and forward between the developed societies of the West and the still traditional, unmodernized communities of many parts of Asia and Africa, it is a sobering thought that we may be almost the last observers able to compare these two worlds as living and functioning communities. Just as the coming of agriculture, millennia ago, thrust back the hunters and food-gatherers to such remote fringes as the Kalahari Desert or the upper waters of the Amazon, so today modern scientific and technological organization is within sight of capturing the whole world. There is, therefore, some urgency in attempting to define the contrasts while there is still time to observe them at first-hand.

These are only random impressions. It is quite simply impossible in a few hundred words to place two worlds side by side and reach the end of their contrasting complexities. Yet if one takes the best short definition available of the purpose of human society—to make possible “life, liberty and the pursuit of happiness”—some contrasts seem startlingly clear.

Barbara Ward, “We May Be Rich but They Are Happy,” *The New York Times Magazine*, May 5, 1963, pp. 22–23, 120. © 1963 by The New York Times Company. Reprinted by permission.

In all that belongs to the material maintenance of life, our modern society represents a breakthrough to so many new, beneficent and liberating possibilities that one is tempted to feel that only now is neolithic society being left behind. Take the basic elements of physical existence—food, water and health—and a symbol for each—an agricultural research station, a village pump, a modern dispensary—and it can be seen that what modern science and technology bring about is an almost total transformation of the opportunities inherent in being alive.

The research station is attached to a small agricultural college in the Indian state of Gujarat. Mango trees line the road leading to modest, white, flat-roofed stucco buildings and on either side lie the experimental plots—rows of corn, rows of peanuts, rows of pulse and grain. Each carries its small square plaque on which is noted the amount and mix of fertilizer, the code number of tested seed, the routine of watering and weeding. As these variables are combined in optimum proportions, strong plants growing thickly, with good color and a sheen of success, fill up the rows. But on either side, output falls away and at some points, in some dusty furrow, one sees the pitifully thin plants—weak stalk, pale leaves, minute yield—which are labeled “typical unimproved peasant product.”

This is the flimsy crutch on which, hitherto, the bulk of rural life has had to lean. Between the thin and straggly row and the burst of vigorous growth lies a total revolution, the key revolution of modernity—scientific experiment applied to human need.

Nor is this revolution to be seen only in the experimental plots. The college is helping to train a new generation of modern farmers. Its classes in diet and food values and vegetable growing instruct future mothers in the art of adding protein and vitamins to the traditional debilitating starch diet of the rural poor. Some observers claim that even after only one decade, the signs of the revolution are becoming more and more widely visible in the villages—in straighter limbs, brighter eyes, in an end at last to the swollen stomachs, matchstick legs and heavy listless heads bred of hunger edema.

For the symbol of water, we can go to another continent—to an African village deep in the bush. There, among the *neem* trees in a shady opening within the square of huts, women and children are gathered around the newest and most popular of the village's few amenities—the tap and basin of a piped-water supply. Since this is Africa, laughter almost swallows up the exchange of tales and gossip.

There is time for neighborliness, time to stand and talk because, with this one change, a couple of hours of the women's time each day has been saved from weary, back-breaking toil.

Only yesterday, the villagers' water, a muddy stream, lay two miles away down a steep slope. Morning and evening, the women labored up the hillside, balancing half-gallon gasoline drums of contaminated water on their heads. One would have noticed the superb carriage of neck and shoulders, the painfully lordotic spines, pelvises out of alignment (agonies stored up for childbearing); proud bodies already headed for premature old age or premature death. Thus, for the group around the village tap, the change spells straighter limbs, healthier children, a limit to the dismal infestation of human bodies, more energy, longer life.

Better diets, cleaner water—these are already halfway to the greatest of all material blessings: good health. And then modern medicine steps in to take more and more people the rest of the way. We can turn back to India for an effective symbol—a mobile hospital unit sent out each day from the great missionary hospital at Vellore.

With a doctor and a couple of nurses and all the equipment of a modern dispensary, the white ambulance, dusty from the dry roads or over the axles in monsoon mud, goes from village to village, setting up shop in the square and surrounded, 10-deep by would-be patients. There are malaria suppressives to hand out. A broken leg is set which once would have left the man a cripple for life. One of the nurses conducts a nonstop maternity clinic for the pregnant women and newborn babies. Sometimes there is a question of emergency action and, before the day is out, the sufferer is on the way to Vellore in an ambulance. And all the time, the basic education of the villagers in better means to health goes forward—diets which will end such unsightly and retarding deficiency diseases as washiakor; the covering of food against flies; cleanliness and the disposal of village refuse; issues of DDT and advice on spraying.

Day in, day out, in Asia and Africa and Latin America, the first small waves of the modern flood of preventive medicine lap at the edge of the villagers' lives. There may be delays and setbacks—as in the Congo. Not every area will be ready for transformation at the same speed. But there is no doubt about the direction. Modernization brings physical benefits too basic for any people to renounce them. Indeed, the demand for them is, everywhere, the driving force for change.

This trinity of physical renewal—better food, water supplies and better medical services—leads to more than a personal or local transformation. It lies at the root of social modernization as a total process. The man with a better diet and without the major endemic diseases is a man able and vigorous enough to take up still wider opportunities of technical change. And in doing so, he develops a new type of intelligence. . . .

And from there the road leads onward, beyond the satisfaction of ordinary necessities, on toward the fringes of the affluent society in which, for the first time in human history, the poor as well as the rich can acquire more than they actually need.

This availability of resources is, in itself, a kind of freedom. Liberty has little meaning for the blind and legless Indian beggar who sits all day on the dusty steps of the village temple. In all prescientific societies, there are no means of feeding all the people all the time—and few will maintain that men are free while they are starving to death. In this sense, if the nations with advanced technology were ever to realize their stupendous opportunity, modern capital's modern science could break the heaviest physical fetters—of hunger and sickness—which still keep mankind in bondage.

So far, however, only fratricidal armament programs and the race to the moon have managed sufficiently to engage modern man's imagination in a total unlocking of resources which could, in the field of development, remake the face of the earth. . . .

It is the third element in the trinity of social purpose—the pursuit of happiness—that least lends itself to dogmatic comparisons. Profoundly beneficent when it is a question of physical life, more or less neutral on the issue of liberty, modern technological society answers the test of happiness in so varied and uncertain a fashion that no verdict seems possible save the old Scots verdict of "unproven." One cannot dismiss the profound contribution made by food and health to personal happiness. Who can starve and be happy? Yet, as Dr. Erich Fromm has pointed out, a man can be well-nourished and physically strong and yet be, in a psychical and emotional sense, mad, or at least alienated.

Happiness springs not only, or even primarily, from a healthy physical organism. It demands less tangible qualities—of mental ease, of emotional spontaneity, of creative will—and it is arguable that much of the nostalgia which, consciously or no, recurs so constantly in modern man's reactions to the pretechnological society—from the

Romantic cult of "the noble savage" to the erudite, anthropological studies of our own day—springs from a sense that, somewhere along the road, a garden of Eden has been left behind.

Perhaps the best clue to follow is to look at one of those occasions in the premodern society which, to the outside observer, seems to display qualities of joy and exhilaration without an obvious counterpart in urban, industrial life. For sheer sustained yet spontaneous rejoicing, it is difficult to surpass one of the great harvest festivals in West Africa—say, the yam festival at Odomase in Ghana.

For weeks, the peasant farmers and their families have worked, severally and collectively, to dig up the great tubers and store them away against the months of drought. Now the tribe has come together to thank the gods of weather and soil and tribe, to honor the chief and the subchiefs and the elders and to have a vast communal party, picnic, clambake, binge, beano—call it what you will—which, with varying rhythms and ceremonies, stretches over a full three weeks.

Any day will do. The drums summon the crowds into the streets, until the town is aflame with cloths and kentes in gold and orange and brown and red. The Konor is carried by on his palanquin, loaded with golden insignia, a little boy seated beside him, lavishly ornamented to represent the soul of the tribe; his subchiefs follow him in splendor of the second degree, linguists carrying the gold and ivory canes of office, crimson umbrellas, heavily encrusted with gold and gilt, twirling and bobbing overhead.

In the town square the priests make libations to the gods, pouring—preferably—Gordon's gin on the ground. The drummers beat up the rhythm to a frenzy and the dancing begins; more and more join in, the crowd claps in unison, the ballad-singers open the deep-voiced choruses and individual voices rise high above the tide of sound to cry out original paeans of encouragement and praise.

Everything is in movement, from the tiniest child concentratedly performing its own version of the Twist, up to the great circular dances in which whole groups join in, keeping the beat with shuffling feet, the rhythm with every muscle of their bodies, conveying untold intricacies of meaning in the constant movement of arms and hands. And from the whole assembly, locked in dance and music, there wells up a sense of the gayest, the most spontaneous enjoyment and zest.

Africa, it will be said, has its own indestructible joy which neither climate, disease nor oppression has ever quenched. But here is another instance, this time from India, and all the more remarkable in that

it takes place beyond the frontier of the pretechnological society. The transition to modernity has begun, for the scene is inside a factory in Bangalore. The day is the feast of Sarasvati, goddess of learning and hence of skills. No one works this day. Every factory is given over to the celebration of the fete.

In each department, workers have competed with each other to produce the most imaginative settings for the goddess's shrine. In the section producing plastic telephone equipment, for instance, the phones in pinks and whites and greens have been woven into a complicated mosaic at each side of Sarasvati's image, behind which flash the lights of a switchboard set at blink. Before the shrine itself, workers have drawn in brilliant colored chalk the *longulas*, traditional formal drawings of the sacred lotus blossom; above hang home-made paper garlands; everywhere, tied to lathes and drills, scattered on work tables, massed at the shrine, are flowers—marigolds above all, shining orange and giving off a pungent smell.

At the climax of the festival, a somewhat harassed managing director tours each shrine. A girl comes forward and marks his forehead with colored chalk. A Brahman priest—he may be a machinist on that floor—gives the director the offerings of bread and flowers and sacred fire and blesses the men and the work.

At this point, someone pulls a string and down over the director, smothering him and lodging in eyes, ears, tie and jacket, tumble the marigolds which have been joyfully concealed in a booby trap above his head. Between prayers and laughter he passes on—to the next blessing and the next practical joke—while the workers' wives in their brightest saris and the children in their best and cleanest clothes, settle down with father for a picnic under the lathe he works all the week. For a moment, the life of home and factory, of work and play, of time and eternity coalesce in a shared experience, balancing reverence and laughter.

These are, as it were, the big set pieces in the rhythm of celebration and gaiety which runs through the calendar in societies still below the threshold of modernity. It is difficult not to feel that here is a quality of happiness, of direct spontaneous joy which does not appear so readily in technologically developed communities. Can one analyze its quality?

It is not easy, for, at this point above all, the observer can fall into all the traditional oversentimentalizations of the simple life. Yet there are definable elements which recur in the festivals of older societies

and perhaps they offer a clue to the possibility that modernization, for all its progress, does not yet know how to add to health and long life and knowledge and material plenty the crowning gift of joy.

First, one can distinguish differences of scale. The units of human organization in pretechnical society remain small, people can know most of their neighbors. Family and clan relationships and celebrations give a certain density to life which, of course, may be stifling but is more often comforting and enriching. There is, in theory, no reason why a modern society should not foster social groupings on a comparable human scale. But in practice, it tends not to do so. Everywhere, rapid, compulsive urbanization marks the onslaught of modernity. Vast cities, often decaying at the center and always spreading out on a commuting tide of suburban uniformity, provide more and more of the environment of modern man.

Within them, no doubt, clubs, associations and devoted family life can flourish. But they do so, as it were, against the grain and beside them teem the evils of loneliness and anonymity: the strain on isolated mothers with young children and a husband only on Sundays, the dereliction of urban youth seeking in street gangs that sense of belonging which the city has submerged, or, at the extreme end of the scale, the oppressive collectivism of single-party states in which a mechanical unity is clamped down as a substitute for the decay of more organic links.

The smaller group encourages a second element in earlier patterns of happiness—the fact of participation. All Africa's dancing and singing are done by everybody. In the Indian fetes, costumes, decorations, ceremonies are the work of all. One of the most melancholy contrasts possible lies between unspoilt village festivals up-country in Nigeria and groups of Lagos children with their eyes glued to the television screen watching tenth-rate Western and twentieth-rate police dramas.

True, modern civilization does not exclude active participation, nor should one underestimate the amount of keen amateur activity; yet the unchecked forces of mechanical reproduction and commercialized entertainment press all the time in the opposite direction. It is easier to flick a switch than practice in the choir.

And this pressure of readymade pastimes and amusements affects another source of the joy still apparent in pretechnical societies—the element of spontaneity, of a direct, fresh response to living and being. This spontaneity is not easy to define. In fact, none of the phenomena of happiness lends itself too well to our typically modern dissecting

and analyzing intelligence. There is a factor in it of rejoicing in the sheer existence of some object—a bird, a flower, a son, a sword. But there is an element, too, of enhancing the object by communicating to it the power and life of the observer's own personality.

The Africans have a name for man's power to enhance, in beauty, force and emotion, the given facts of being. They call it *nommo*. And men with this gift—poets, singers, seers, saints—are said to have *baraka*, the power of enhancement, of giving and having life and having it more abundantly. For societies in which this is a high and valued endowment, it is virtually impossible to conceive of such modern phrases as "to kill time" or "the problem of leisure."

Peasant society has a lot of leisure. Between harvest and sowing, there is time for living in the spontaneity of talk and visiting and song and pilgrimage. True, the gift is not lost in the West. Poets and seers contrive to live among us. But prestige lies on the whole elsewhere. Our words of power are, in the main, scientific formulas which compel nature to meet our needs and pleasures but subtract from reality its wholeness, giving us the measurable and controllable, not the living, shining, touching fact of being itself.

This lack points to another, perhaps decisive difference. Behind the fun and celebration of the premodern festivals lies a sense of a larger order of the gods whose goodwill has provided the harvest, whose being and patronage, like *baraka* itself, enhance the depth and significance of dance and song.

This sense of an order and purpose which transcends man's daily doings takes a form, in prescientific society, which it can never take again. Scientific explanations have inevitably taken the god out of the thunder and put tractors and fertilizer into the harvest. The deities of Africa and Asia will follow the gods of Greece away from stream and field.

But, in the larger sense of human existence needing, for joy and sanity, a sense of purpose and direction, an awe and wonder, which, as Einstein reminded us, is the very source of inquiry and hence of science—in this sense, our technical society, so wrapped up in means and manipulation, too often fails to give us direction and dedication, without which we can be rich and healthy and strong, yet bored and joyless as well.

The answers of the modern world to the pursuit of happiness will differ decisively from those given in traditional societies. But their joy and spontaneity and our frequent lack of it should remind us that

answers have to be sought. Technological society does not produce them as a natural byproduct. Our concentration on material betterment and economic rewards has given us what we sought—incomparable wealth. It does not tell us automatically how to use it well.

In this field, therefore, of joy and creation, a backward look along the road of man may serve some purpose. Then, with the new tool of material plenty in our hands, we can take up again the search for deeper ends and values—of spontaneity, of life, of dedication—which our very achievements have led us to neglect.

3-2. The rub of cultures

"The revolution will not be stopped. . . . Better to ask how we can be a constructive force in it."

FRANCIS E. DART

It is sometimes thought that the ethical responsibilities in assisting development can be summed up in the traditional community-development slogan: helping people to help themselves. Were the goals of those within underdeveloped nations unambiguous and were they in possession of the knowledge that would enable them to foresee with reasonable assurance the consequences of their immediate wants, a strong case might be made for such a view. Unfortunately, such is not always the case. In the selection that follows, Francis E. Dart, a science teacher working in Nepal with an American educational assistance program, illustrates how far from the case this may actually be. He recognizes that the emerging nations have now reached the point from which there is no turning back, the point at which the drive toward the material and technological benefits of modernization cannot be braked. But, even though this be true, are we thereby absolved from responsibility for the consequences of the assistance we render, the technologies we present? In promoting change, have we

not, Dart asks, an ethical responsibility to guide our actions by science, which is the heart of the way of life we refer to as modern? Have we not, further, a responsibility to try to assure that the changes that are surely coming disrupt as little as possible and be as genuinely beneficial as we can make them? Finally, we might well add, can we fulfill these obligations in our day without a wedding of social science and the ethics of social change?

[Francis E. Dart]

I

The thoughts that I record here began to take shape three years ago in a small mountain town in Nepal where my trip was interrupted by a three-day festival to Laksmi. I had been walking for eight days and was to walk nearly twenty more without once meeting a wheeled vehicle or any other evidence of mechanized civilization. Through dense tropical forests of sal a hundred feet above sea level, up steep slopes thick with rhododendron trees, along great cedared ridges cool even in the sun at 12,000 feet, I had been traveling in the only way one can in Nepal, on foot trails that are sometimes deserted, sometimes thronged with heavily burdened men and women moving in unison, their baskets weighted with new potatoes or ghee. Occasionally the trail would thread a village animated with the play of naked brown-skinned children, with cheerful old men in woolen shawls and shy dark-eyed girls carrying jars of water from the well—an irregular patch of mud-colored houses on the gold of ripening rice paddies surrounding it. With all its beauty and poverty and its growing desire for new ways, in the familiar jargon of our time, this was the underdeveloped country.

I had been asked to go to Nepal in order to teach science and to introduce new methods and equipment to the science teachers there. Soon after my arrival, however, and before I had started my project, it became clear that this was not really wanted, at any rate not by the teachers who would be most affected by my work. Equipment would

Francis E. Dart, "The Rub of Cultures," *Foreign Affairs*, vol. 41, no. 2 (January 1963), pp. 360-368. Copyright © 1963 by the Council on Foreign Relations, Inc., New York.

certainly be acceptable, but not new methods and certainly not any direct teaching. I soon became convinced that the objections were not directed at me personally nor at American assistance and yet ran very much deeper than mere misunderstanding of words. It was more a matter of the social structure of a Nepalese college, which does not permit a professor to admit that there is anything more for him to learn, and of unwillingness to accept the changes that might result from a different sort of teaching. (As a scientist or science teacher I would be very welcome, provided I did not do anything.) In growing consternation, I began to see that I was to be more of a symbol than an active scientist—a sort of offering to be laid like a flower at the shrine of a modern deity. I was pretty sure I would wilt. . . .

I recount all this because it is substantially the situation in a great many of the underdeveloped countries. American aid is offered and accepted at top government levels and then met with resistance or polite evasion when it is delivered. Particularly is this true when the aid involves changes in old ways or ideas. Yet these very countries are asking for assistance because they want to change. We, in our turn, are puzzled and exasperated, yet in our puzzlement we ourselves doubt the relevance or competence of our own social science. The very development of Western science which should help us the most we are unwilling to use. Bravely we struggle ahead without it, as though to show the world that we can do it anyway—even with half our brains tied behind us.

II

Asia today is a scene of intense and rapid change. Strong winds of economic, political and social innovation are sweeping through every corner of the continent, bringing in new institutions, new industries and technologies and a whole new attitude toward Asia's part in the world ahead. Taken together, these add up to a revolution to compare with any the world has seen. Beneath all the turmoil, however, there lies a vast inertia, a great ocean of people and tradition, slow to respond to the storm at the surface, yet moving with deep and powerful currents that are hardly noticed above. The immediate revolution, one which will in time reach down to stir even these depths, is basically the same over all of Asia and is, or will be, in most of Africa too. One might almost say that it started with Marco Polo or Saint Paul; with the Western merchants and the colonial governments that

followed them to exploit the rich resources of the East; or with the Christian missionaries who brought with them schools and medicine and a new concept of individual worth. Together, they sowed their seeds of resentment and hope and new knowledge, unable, surely, to guess what might be the harvest of so mixed a planting.

After World War II, these elements exploded into a drive for independence and for living standards comparable, if possible, to those in the Western world. The people of the hitherto underdeveloped countries determined now to have food enough and medicines, and yes, airplanes and wrist watches and nuclear reactors, too, and to have them on their own terms, free from Western exploitation. They wanted, also, to find and somehow adopt the concepts of equal justice, equal dignity, equal cosmic importance for all—concepts that the Westerner enjoys but has been unable to share. It is perhaps well to mention here that, in Asia at least, these things are wanted without Western religion, which is viewed with deep distrust. This is a fact of great significance, because in Asia religion is a vital and necessary part of living which, unlike Christianity, offers no strong motivation toward social change.

Not only are changes desired, they are desired in a great hurry. Generations of Western progress are to be absorbed in a decade or two and it is useless to suggest a slower, sounder pace, for the very continued existence of most political régimes depends upon their delivery of an almost impossible rate of progress; for them the fastest pace is the soundest. Many among their citizens know about higher standards and are unwilling to wait longer; and many of us who would help know what is possible (in a way that our forebears did not know for us), and we are eager to urge them forward. Moreover, now that a start has been made, it may well be that a rapid pace has to be maintained just to stay ahead of the expanding population. Thus, while I was in Nepal, the literacy rate was less than 5 per cent and yet, with all the nation's efforts to provide more schools and teachers, literacy was decreasing each year.

One is tempted, nevertheless, to question the wisdom and even sometimes the safety of proceeding so rapidly. The whole thing suggests to me an attempt to present the Bonneville Power System to St. Thomas Aquinas. One wonders just what will come of it. Yet I am sure that there is no practical use in asking whether this is good or safe. These questions are not only very complicated, but also irrelevant. It is not necessary to look very far even in Nepal (which has

been isolated until very recently) in order to find convincing evidence that there is no possible turning back. People who have once learned of modern antibiotics will not be willing to go back to the "unspoiled past" with its high infant mortality. The mountain villager who showed me his new kerosene lantern with pride and asked if we had anything as good as that in America will never go back to using pine torches. The man or woman who has once attended a modern school will not be the same again, nor will his village. I met a Gurung woman who knows this. She cannot read or write two words, but she contributed three thousand rupees to her village to build a school and then herself walked five days from her village to meet me and ask if we would train teachers for the school. Shall we tell her it was only an old woman's mistaken dream? Can we refuse to train teachers for her school?

No, the revolution will not be stopped. It is of no use to ask whether it should ever have started or who started it. With or without our help it will come, and it is better by far that America should be involved, for we have much of value to offer. Better to ask how we can be a constructive force in it, how we can help make of it a renaissance instead of a new enslavement. Better for them and also better for us.

III

It is the fruits of Western technology that are most of all wanted. Everything else from America, our literature, art or "culture," could be dispensed with except only these precious apples so long forbidden. It is jeeps and tractors, hospitals and antibiotics, hydroelectric plants and refrigerators that represent the new order of civilization. It is industry (meaning wealth) and education (meaning training) which are to transform life. It is modern weapons which are to ensure national liberty and perhaps even allow a part in bigger games among the nations. Modern technology is seen as the liberator of the Western world now coming to liberate the Eastern. . . .

The introduction of new techniques, new industries and new education into a community is certain to bring far-reaching and often unforeseen changes in working habits, in work hours, in the status within the community of new sorts of workers, and in the distribution of money and power. These soon begin to affect social structures and institutions, family patterns, leadership patterns, etc. Before long, the very cultural foundation of the community may seem to be threat-

ened, its religion called into question, its most basic philosophies of man's relation to nature and to God, of the status of women or the training of children, altered and forced to accommodate to new pressures. Of course, such changes took place in Western culture too under the impact there of the industrial-technological revolution, and, even spread over generations, they seemed to be very drastic. One can only imagine what their impact must be, crowded into a few years in an Indian or African village. This is the real cost of the revolution. . . .

The whole process abroad is like an attempt to transplant cut flowers. Surely the changes to be introduced need to have roots in an indigenous technological revolution that will give them continuity and relationship to a whole. In the end this means that the developing nations need to have their own scientific revolutions.

IV

Far back in the hills of Nepal, seven or eight days' walk from any contact with the modern world, iron is mined and smelted and fabricated into tools. The inhabitants of the village of Those who do this use almost exactly the same process of ore-smelting which is employed in similarly remote Chokwe villages in Angola, where, as a boy, I used to admire the native-made hunting knives and arrow points. It is, in fact, the same smelting process which in ancient Greece led to the development of metallurgy and eventually to the science of chemistry. The Nepalese and the Angolans have used the process for generations, perhaps for many centuries, yet there is no hint of chemistry in Those. The men and women who operate the smelter know what to do, but they are not curious about the transformation that converts stone into metal. They do not depend upon any understanding of it in order to keep it going or possibly improve it. For such purposes, they use a different device; into the wall of the clay smelter is molded a small image of a deity who oversees the process and to whom deference is paid before each run.

Technology is not science. Tools and the skill to make and use them are found everywhere, but science is a unique development limited almost entirely to the Western world where it has played an essential part—perhaps the most essential part—in making possible the enormous variety of innovations that collectively make up the industrial-technological revolution. Not only has the scientific revolu-

tion given the Western world the fundamental understanding of nature that makes these innovations technically feasible, but it has also fostered an attitude toward nature and natural forces that allows for their manipulation and control. The importance of this latter condition is not often appreciated, for we live and grow up from childhood in an atmosphere saturated with science. Before entering kindergarten, our children play with "scientific" toys, hear about germs, watch television and know all about automobiles and airplanes. Third graders do "research" and their parents can scarcely buy a tube of toothpaste without resort to science. As a result, we accept a scientific, a rational view of nature without question. We take it for granted that things which are not understood will some day be understood and that in understanding natural phenomena lies the way to a better life.

Such is not the case everywhere. In Nepal, as in most of Asia and Africa, children grow to adulthood in a world that is saturated not with science but with non-science—with a deep running view of nature that is essentially non-rational, non-objective. It is a world where a cholera epidemic calls for special prayer-flags no less and no more than for immunization; where a new diesel generator for the college cannot be started after installation until a blood sacrifice has rendered it safe; where only a fool would operate a bicycle or jeep without a similar ceremonial sacrifice once each year; where the timing and conduct of every new undertaking is controlled more by astrology than by technology. The important distinction here is not one of religion as such. In both East and West religion may be a mature expression of man's search to know "that of God" in his being. It is rather a question of one's view of nature, a question as to whether nature is subject to rational understanding or not. Across the street from the principal college in Kathmandu is a wall into which is built a narrow triangular window neatly framed and decorated and provided with a small shelf of flowers. One of the professors explained to me that there is a goddess living in the field beyond the wall who likes sometimes to cross the street, and it would have been discourteous to build the wall without providing a passage for her convenience. Any Westerner visiting Kathmandu who is unable to accept this goddess as a real and influential member of the community should, in my judgment, think of himself only as a tourist.

Science in such a setting is likely to be considered as a charm, practiced by the Westerner, but essentially qualitatively like the many

older charms used to ward off misfortune or ensure good. The acceptance of science as a charm is clearly illustrated in medicine, where drugs and doctors are eagerly accepted, whereas public health measures are met with great reluctance and little if any understanding. The purifying of drinking water by boiling is more likely to be understood as a ritual purification than as biological. Once the ceremony is performed it may be considered as unimportant what happens thereafter to the water—what may be added, whether clean containers are used, etc. Thus our cook learned quickly that dishes were to be washed and rinsed in boiled water and he faithfully complied with this instruction. However, he saw nothing wrong with drying the dishes with a cloth he had just used to mop the floor and he could not understand my wife's distress when she discovered this. Even the native-born scientist frequently finds himself a practitioner of an alien cult uncomfortably suspended between two worlds and not fully accepted into either.

A true scientific revolution which could support technology would profoundly affect the cultures of the underdeveloped nations in their deepest traditions and not merely in the obvious things of roads and tractors and the like. It would be certain to bring about major changes in religious philosophy, ethics and social structure. Surely this is playing with fire. Surely we should stop to consider before undertaking any such program.

Yet, in fact, there is little choice, for events have moved so far and so fast that some kind of technological change is now inevitable. The real questions left are only how it will come and how much disruption can be avoided. Moreover, in the change that is surely coming, very much that is good and needed can be included. If we cannot and would not prevent the growth of science in the developing nations, we can certainly help to better its coming.

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chapter 4

Renewal through Education

4-1. The directions of choice

"The problem is not whether the schools should participate in the production of a future society but whether they should do it blindly or with the maximum possible of courageous intelligence and responsibility."

JOHN DEWEY

The previous chapter served to underscore the significant ethical dimensions of the educational endeavors in modernizing nations. The attempt of emerging nations to use education for their own *modernization* or *development*, is an expression of their faith that education can achieve social reconstruction. This attempt also recognizes that education should do more than preserve the heritage of their past: that it should assume a role in shaping their future, a role it can perform only as it changes the very character of their citizens. The selection that follows is unique among those chosen for this volume in that it was not addressed specifically to the problems of education in developing nations. The fact that it was written in another context does not diminish its relevance, however. The influence of John Dewey as a seminal thinker in directing the concerns of educators to the social scene and in helping them to clarify both the conservative and constructive roles of education is clearly and often explicitly reflected in the think-

ing and writing of those who are today attempting to use education as a practical instrument in the creation of a new social order. Dewey's short article clarifying the major alternatives that face education is a pioneer statement of the role of education in social reconstruction, on which Theodore Brameld elaborates further in the subsequent selection, a role that even when not so explicitly recognized, underlies the fervor for educational reform in much of the modernizing world.

[John Dewey]

Attention has been continually called of late to the fact that society is in process of change, and that the schools tend to lag behind. We are all familiar with the pleas that are urged to bring education in the schools into closer relation with the forces that are producing social change and with the needs that arise from these changes. Probably no question has received so much attention in educational discussion during the past few years as the problem of integration of the schools with social life. Upon these general matters, I could hardly do more than reiterate what has often been said.

Nevertheless, there is as yet little consensus of opinion as to what the schools can do in relation to the forces of social change and how they should do it. There are those who assert in effect that the schools must simply reflect social changes that have already occurred, as best they may. Some would go so far as to make the work of schools virtually parasitic. Others hold that the schools should take an active part in *directing* social change, and share in the construction of a new social order. Even among the latter there is, however, marked difference of attitude. Some think the schools should assume this directive role by means of indoctrination; others oppose this method. Even if there were more unity of thought than exists there would still be the practical problem of overcoming institutional inertia so as to realize in fact an agreed-upon program.

There is, accordingly, no need to justify further discussion of the problem of the relation of education to social change. I shall do what I can, then, to indicate the factors that seem to me to enter into the

John Dewey, "Educational and Social Change," *Social Frontier*, vol. 3 (May 1937), pp. 235-238. Copyright © 1937 by Social Frontier, Inc. Copyright renewed 1965 by Mrs. John Dewey.

problem, together with some of the reasons that prove that the schools do have a role—and an important one—in production of social change.

One factor inherent in the situation is that schools *do* follow and reflect the social “order” that exists. I do not make this statement as a grudging admission, nor yet in order to argue that they should not do so. I make it rather as a statement of a *conditioning* factor which supports the conclusion that the schools thereby do take part in the determination of a future social order; and that, accordingly, the problem is not whether the schools *should* participate in the production of a future society (since they do so anyway) but whether they should do it blindly and irresponsibly or with the maximum possible of courageous intelligence and responsibility.

The grounds that lead me to make this statement are as follows: The existing state of society, which the schools reflect, is not something fixed and uniform. The idea that such is the case is a self-imposed hallucination. Social conditions are not only in process of change, but the changes going on are in different directions, so different as to produce social confusion and conflict. There is no single and clear-cut pattern that pervades and holds together in a unified way the social conditions and forces that operate. It requires a good deal of either ignorance or intellectual naiveté to suppose that these changes have all been tending to one coherent social outcome. The complaint of the conservative about the imperiling of old and time-tried values and truths, and the efforts of reactionaries to stem the tide of changes that occur, are sufficient evidence, if evidence be needed to the contrary. . . . If conservatives in education were more aware of what is involved in their position, and franker in stating its implications, they would help bring out the real issue. It is not whether the schools shall or shall not influence the course of future social life, but in what direction they shall do so and how. In some fashion or other, the schools will influence social life anyway. But they can exercise such influence in different ways and to different ends, and the important thing is to become conscious of these different ways and ends, so that an intelligent choice may be made, and so that if opposed choices are made, the further conflict may at least be carried on with understanding of what is at stake, and not in the dark.

There are three possible directions of choice. Educators may act so as to perpetuate the present confusion and possibly increase it. That will be the result of drift, and under present conditions to drift is in the end to make a choice. Or they may select the newer scien-

tific, technological, and cultural forces that are producing change in the old order; may estimate the direction in which they are moving and their outcome if they are given freer play, and see what can be done to make the schools their ally. Or, educators may become intelligently conservative and strive to make the schools a force in maintaining the old order intact against the impact of new forces.

If the second course is chosen—as of course I believe it should be—the problem will be other than merely that of accelerating the rate of the change that is going on. The problem will be to develop the insight and understanding that will enable the youth who go forth from the schools to take part in the great work of construction and organization that will have to be done, and to equip them with the attitudes and habits of action that will make their understanding and insight practically effective.

There is much that can be said for an intelligent conservatism. I do not know anything that can be said for perpetuation of a wavering, uncertain, confused condition of social life and education. Nevertheless, the easiest thing is to refrain from fundamental thinking and let things go on drifting. Upon the basis of any other policy than drift—which after all is a policy, though a blind one—every special issue and problem, whether that of selection and organization of subject-matter of study, of methods of teaching, of school buildings and equipment, of school administration, is a special phase of the inclusive and fundamental problem: What movement of social forces, economic, political, religious, cultural, shall the school take to be controlling in its aims and methods, and with which forces shall the school align itself?

Failure to discuss educational problems from this point of view but intensifies the existing confusion. Apart from this background, and outside of this perspective, educational questions have to be settled *ad hoc* and are speedily unsettled. What is suggested does not mean that the schools shall throw themselves into the political and economic arena and take sides with some party there. I am not talking about parties; I am talking about social forces and their movement. In spite of absolute claims that are made for this party or that, it is altogether probable that existing parties and sects themselves suffer from existing confusions and conflicts, so that the understanding, the ideas, and attitudes that control their policies, need re-education and re-orientation. I know that there are some who think that the implications of what I have said point to abstinence and futility; that they

negate the stand first taken. But I am surprised when educators adopt this position, for it shows a profound lack of faith in their own calling. It assumes that education as education has nothing or next to nothing to contribute; that formation of understanding and disposition counts for nothing; that only immediate overt action counts and that it can count equally whether or not it has been modified by education.

Before leaving this aspect of the subject, I wish to recur to the utopian nature of the idea that the schools can be completely neutral. This idea sets up an end incapable of accomplishment. So far as it is acted upon, it has a definite social effect, but that effect is, as I have said, perpetuation of disorder and increase of blind because unintelligent conflict. Practically, moreover, the weight of such action falls upon the reactionary side. Perhaps the most effective way of re-inforcing reaction under the name of neutrality, consists in keeping the oncoming generation ignorant of the conditions in which they live and the issues they have to face. This effect is the more pronounced because it is subtle and indirect; because neither teachers nor those taught are aware of what they are doing and what is being done to them. Clarity can develop only in the extent to which there is frank acknowledgment of the basic issue: Where shall the social emphasis of school life and work fall, and what are the educational policies which correspond to this emphasis?

4-2. The power of education

"The future should become in a profound sense the guiding temporal principle of general education."

THEODORE BRAMELD

The relationship between education and culture and between philosophy and social science that were stressed in the works of John Dewey have since his time been notably further elaborated upon and emphasized by Theodore Brameld. Perhaps nowhere is this faith in the

potential of education for social reconstruction more evident or more clear-cut than in Brameld's comprehensive study of the role of education, actual and potential, in remaking Puerto Rican culture. This significant work, based on the judgments of Puerto Ricans in many walks of life, reflects a conviction that a philosophy of education or a program of education should find its meaning in the order, processes, and goals of the culture for which that education is intended. Moreover, in Brameld's judgment, mere relationship is not enough; the key lies in the quality or nature of the relationship. Education, to fulfill its rightful function, must come to grips with the most urgent *problems* of a culture; it must rest upon considered appraisals and *commitments* within that culture, and it must itself remain hospitable to continuous *experimentation* and reconstruction. It is immediately apparent that such an approach to the role of education in development cannot be satisfied with mere form or outline but must focus conspicuously upon content. The brief philosophic summary that follows, which constitutes in a sense the capstone of Brameld's study, makes it abundantly clear that education that takes account of cultural goals and social facts will result in changes in curriculum, administration, pedagogical method, and in a self-critical process of experimentation that will provide a safeguard against stagnation. Educational change undertaken in the name of development or reconstruction that ignores such considerations, as this book will suggest time and again, may indeed be education for *arrested* development.

[Theodore Brameld]

Education in Puerto Rico, as everywhere else, is both product and agent of the culture. Philosophy, in turn, is regarded in this context as the expression of the meanings inherent in culture and in education.

"Reconstructing the Philosophy of Puerto Rican Education," from *The Remaking of a Culture: Life and Education in Puerto Rico* by Theodore Brameld. Copyright © 1959 by Theodore Brameld. Reprinted with the permission of Harper & Row, Publishers, Inc.

There are innumerable ways to examine the network of relations of culture, education, and philosophy. In this study we have tried to do so by means of a theory of culture developed with the help of leading anthropologists, enriched by philosophers of history and other thinkers, and crystallized in terms of our own orientation. The kinds of problems we have raised with respondents have, of course, been governed by our conceptions of culture, education, and philosophy as these interfuse. An interpreter with a different conception would deal with different problems and thus obtain different reactions to the issues confronting Puerto Rico.

Few would be likely to deny, however, that the issues we have raised are fundamental or that the reactions to them are symptomatic of the kind of culture that Puerto Rico has been in the past, of the kind it is today, and of the kind it could or should become in the years and decades ahead. Our purpose now is to select and recapitulate in philosophic terms some of the most significant of these issues and reactions and to appraise them quite frankly from our point of view. We must necessarily be general. The substance is provided by all of our pages thus far.

The culture of Puerto Rico, again like all cultures, is characterized by a triadic relationship of order, processes, and goals—each “angle” of which depends in many complex ways upon both of the others. Any philosophy of education constructed from the postulate we have indicated must therefore take all three angles into continuous account. Let us consider each in turn.

1. From the evidence we have presented within the first of these great categories—order—we conclude that the culture possesses a wholeness that may be described in both “spatial” and “temporal” terms. It possesses a “horizontal” and “vertical” structure that may be depicted in the form of various models or maps that cut across regional “boundaries” (such as subcultures), as well as up and down through ascending and descending strata of class and status. Equally, it can be viewed in time: here cultural order in Puerto Rico proves to be accelerating, and attention may focus upon this fact while one or more of its various spatial dimensions are, for the moment, subordinated. The cultural concept that perhaps best embraces both the spatial and temporal in their most comprehensive and often elusive aspects is configuration—the spatiotemporal way of life which, for any culture, expresses and integrates its most indigenous qualities through many kinds of symbols and many kinds of behavior.

The philosophy of Puerto Rican education should try to translate into everyday school programs all of these aspects of the order of its culture. Granting that the task is gigantic, we have nevertheless been able to record steps that are already being taken, and many more that remain to be taken in the future. In some ways, the most difficult yet imperative of these steps is . . . the articulation and maturation of Puerto Rico's national character.

The key to this problem has been suggested by the term syncretic. By this we have meant, and many of our respondents have suggested in varying terminology, that the Island is developing a pattern, or patterns, the uniqueness of which centers in its amalgam of two principal streams of cultural influence: the Hispanic and North American. The fact that other cultures (the Mexican and Cuban, perhaps most) are likewise experiencing this amalgam, and that other powerful cultural forces have played upon the Puerto Rican culture (the whole of Western civilization, as well as the African and aboriginal Indian), is not overlooked. Nevertheless, the concomitance of two great "caravans of culture" is the primary fact. It produces distinctive if also subtle cultural effects. And educational philosophy should take these effects into serious, sensitive account.

How may it do so? Of many suggestions, two may be reemphasized. First, the schools should consciously and deliberately deal, though perhaps pervasively and indirectly oftener than in the form of "courses," with Puerto Rico's own cultural style. Provocative concepts such as non-nationalism that throw light upon the problem should be examined and discussed until they achieve greater refinement than is now the case. As teachers are made aware of the importance of the task, as courses of study begin to raise relevant questions concerning it, the ambiguities and confusions that still remain are likely to decrease. Thereby young citizens should gradually acquire greater clarity of mind and feeling about their culture and thus of themselves as at once its creatures and its makers. This objective, in turn, requires less artificial superimposition of either Continental or European-based educational philosophies than is still habitual.

Second, education on all levels should at the same time face those difficult questions arising from configurational and metacultural expressions of the Puerto Rican order. Here the need of critical habits of inquiry—above all, scientific method—cannot begin to develop too soon. The schools, beginning in the grades, should become

forums through which discrepancies and hypocrisies between ideological creed and everyday behavior are revealed openly and frankly, no matter what sensitive issue is at stake. Democracy, for example, remains a sham in the degree that authoritarianism in administrative and pedagogical routines prevails over sharing, free discussion, and mutual decision-making. Incompatibilities between moral code and moral practice, between ritualistic dogmatism and religious dedication, between superstition and scientific approaches to problems of health and happiness, should be exposed and combated as ruthlessly as any other diseases of the body politic. The aim is maximum compatibility of symbol and experience. For only thus can Puerto Rico (or any other culture) eventually achieve that wholeness and stability of character without which it remains vulnerable to the forces of destruction from within and from without.

A philosophy of education appropriate to contemporary Puerto Rico should come to grips, too, with such urgent problems of order as family, class, and history. As elsewhere in the world, the Puerto Rican family is the core institution. To protect it from degenerating influences, it is not enough to teach units or carry on research projects on population or kinship patterns, say, invaluable though these are. Education has the far more solemn responsibility of helping children, fathers, and mothers to understand and cope with the myriad tensions, bewilderments, and conflicts of family life today. This responsibility becomes a central obligation of the Division of Community Education, of the elementary and secondary schools, of the University's Colleges of Education, General Studies, Humanities, Social Sciences, Law, and of all other private or public institutions concerned in any way with general education. Sex, both in its physiological and moral aspects, should be dealt with forthrightly, with due regard for levels of maturation. The search for norms that can both preserve the intrinsic qualities of loyalty and love in the traditional family, yet move forward to more democratic, harmonious, and satisfactory experience for all its members—this is the primary but far from clarified objective. It is pivotal to the needed philosophy of education.

Education's responsibility toward the class structure is also a double one. On the one hand, it is to provide opportunity in the social studies and elsewhere for critical analysis of the overt and covert conflicts that this structure generates. (Color prejudice is one insidious factor here, but still more crucial may be the disparities of economic interest between owner-manager and worker.) On the other hand, it is to

consider the kind of vertical order that ought, as far as possible, to be developed in the future.

For many citizens, the answer to the latter problem lies in the hope of a "middle-class society" with the bottom and top strata less and less pronounced. Even now, though perhaps for the most part unconsciously, teachers tend to emphasize middle-stratum practices and values with minimum awareness of the conflicts they help to induce between their own beliefs and attitudes and those of typical children in their charge. Here, too, the impact of United States culture, with its middle-class orientation, generates confusions and maladjustments which it is education's business to face.

We ourselves question more than do some of our respondents the unqualified desirability of this present trend. To aspire quite legitimately toward a middle-level standard of living for all citizens is one thing; to imperil thereby the more enduring values of the rural and urban common people who constitute the great traditional majority is another thing. The ideas embodied in Operation Serenity, as we understand it, are a preliminary recognition of the dangers inherent in the class problem as it now emerges.

The temporal model of cultural order embraces the philosophic problem of the place that the future as well as the past and present should occupy in the educational program. While agreeing with the stress of our resource panels upon more competent, sustained attention to the Island's past, still more fundamental is the question of whether the whole conception of general education is not in need of reexamination in order to bring both temporal and spatial dimensions into more unified relationship.

History, for example, should be regarded not so much as a discipline studied in a separate compartment of the humanities as a necessary concomitant of any fruitful interpretation of the problems that Puerto Rico faces today. In the course of such interpretation, basic approaches such as the ecological hypothesis utilized in the Steward work, the "great man" theory (that leaders are the principal cause of cultural change), the Marxian view of class struggle and historical materialism, and others should operate as alternative instruments of interpretation. Examination of such issues as progress, causation, and prediction should be integrated with this kind of study—special attention being given the historical relations of the Island with the course of Western civilization in general and of Latin America in particular.

With a minority of our respondents, we agree too that the future

should become in a profound sense the guiding temporal principle of general education. This is not to neglect either the past or present. It is to anticipate the goals of the culture, as they crystallize from wants and hopes of the people.

2. To achieve these goals or ends, it is necessary, however, for education to be concerned centrally with ways or means—that is, with the process by which every culture transmits and modifies the patterns and structures, the spatial and temporal dimensions, of the all-inclusive order.

We have found that the dynamics of Puerto Rican life are, without exception, germane to its educational tasks. Yet with many of our informants, especially on the national level, we support the indictment that school programs are not thus far effectively meshed with cultural change in other major spheres. Accordingly, the almost fervent conviction of vast numbers of people that education is the master key to their own growth and welfare (a conviction which the Hatt and Tumin studies underscore) is somewhat anachronous. Despite the “cultural lag” so often emphasized, Puerto Rican education does act, in some ways, as a potent agency of change—especially of upward mobility—and this remarkable fact should be fully recognized by the required educational philosophy. But such a philosophy should go further: it should adopt the guiding principle that education is *not* the mere transmitter of the cultural heritage, however important this obligation may be. It is also and even more crucially remaker of the heritage.

This magnetic objective can be approached only if and as education functions in continuous relation with all other cultural processes. Up to now, though the philosophy underlying community education is vulnerable in some respects (it is, we think, too nondirective in its group processes, and hence inadequately goal-centered), yet this Division more closely approximates such a relationship than any other ongoing program. Particularly is it effective in implementing what we have called the concept of focus. Concerned as it is with the meaningful needs of people, and motivating them to cope with their concrete problems through organized effort and intelligence, the Division should be an example to the entire system. Thus far it remains much too separated not only from the public schools but from other adult agencies concerned with education.

We are not suggesting that all education should be *immediately*

of this practical kind. Thorough attention should be paid to long-range theoretical, historical, scientific, humanistic, and still other questions of cultural change that may have no direct utility for years or even decades. One of these problems, or rather a multitude of them, requires understanding and application of the concepts of process themselves—assimilation, nativism, and innovation, among others.

Equally basic to the whole of our second angle is the clarification and implementation of a modern theory of learning. That teachers as well as laymen remain confused in their attitudes toward, for example, the central process of enculturation is not only a commentary upon the need for better professional training in educational psychology; it bears fundamentally upon the entire matter of personality development in relation to cultural change.

In this respect, Puerto Rican personalities are no different from personalities anywhere else. They are largely, though not of course wholly, the product of cultural learnings—in school and out—to which they are exposed from the moment of birth. Education has the task of making sure that young personalities will develop that are as healthy and unified as the behavioral sciences can assure. The task is magnified on the Island by disharmony between what we have found to be strongly “negative” as well as “positive” traits—such negative traits as insecurity and often unconscious hostility vying with such positive ones as self-respect and generosity.

The proposed philosophy of education should, in our judgment, advocate ways of learning and teaching broadly harmonious with the functionalistic viewpoint, and subordinate those that are not. This means gradual elimination of rote learning and of authoritarianism in home and school alike. It also means experimentation with core curricula, stimulation of aesthetic and emotional experience as well as purely “rational” kinds, active and continuous sharing in both school and community planning; Island-wide utilization of classroom television and other audio-visual instruments as everyday affairs; and encouragement of critical thinking and democratic action from the nursery school up. At the same time, we believe that the syncretic character of Puerto Rico provides a milieu for the development of a richer, more mature kind of learning than has been typical of Continental schools where functionalistic processes have been stressed. What we have in mind is symbolized in a greater balance between *becoming* and *being*, the former term pointing directly to such proc-

esses, the latter to a widening sense of unity and socialized responsibility in the relations of teachers to children and of children to one another. . . .

3. To speak of "maximum fulfillment" is to speak of the third of our three angles. The goals of the Puerto Rican culture are the apex of its educational philosophy.

Our study of this problem has produced a body of materials with which to meet a unique opportunity—to create a goal-centered, future-centered policy and program that could inspire not only the people of the Island but of many other countries. . . .

More specifically in terms of the problem of values and goals we suggest, again, that a much more rewarding approach is provided by the behavioral sciences, and thus by increasing analysis and interpretation of the multidimensional characteristics of the Puerto Rican culture itself. Even now, despite an almost total lack of Insular research in the field of values that could compare in thoroughness with research in, say, the nature of the family, it is possible to project directions. The conspicuous values enunciated with the aid of our respondents afford one important direction: they help to provide both description and prescription of the human qualities most widely prized by Puerto Ricans. And they tend to show that the latter are both tolerant of cultures with values different from their own and appreciative of universal or near-universal similarities.

That discords prevail and that a number of values now emerging generate disturbances is to be expected in a culture undergoing swift evolution. Thus, in religion we have found radically different notions of what its ultimate valuational significance is or ought to be. Also, Puerto Rican youth reflect current fluctuations. Even political goals remain unclear—particularly whether Commonwealth status or statehood should be the future permanent choice.

Yet, deeper down, some value commitments are already firm. The conspicuous values embodied in the modal personality are not only real; they are accepted as guiding norms. Nonsectarian Christian values such as brotherhood are equally accepted. Most impressive of all is the strength of commitment to human freedom—freedom defined not as a cliché but as the goal of self-expression synchronized with the rights of others, and as the privilege of sharing and democratic planning in terms of the widest possible welfare of the largest possible group.

Puerto Rican education has a double responsibility with regard to

cultural goals. On the one hand, it ought to provide abundant opportunities for direct, critical study of the whole range of problems embracing human values—and this includes such controversial issues as religion, politics, and sex. On the other hand, it ought to provide equally abundant opportunities for students of all ages—*without indoctrination from above*—to achieve uncoerced commitments to whatever goals they may agree upon. Nor are these obligations to be carried out merely in general terms: since values and goals become embodied in institutional arrangements, it is the duty of democratic education to help student citizens determine for themselves and to experience whatever the policies may be that govern these arrangements.

Should a culturally oriented educational philosophy itself give allegiance to clear institutional goals? Our conviction is that it most assuredly should. In an age of crisis, old shibboleths of “impartiality” and “objectivity” in public education prove to be as outmoded as they are often spurious. Indeed, Western history is already ahead of the ideologies that these shibboleths connote. Just as the vast majority of people on this Island are becoming committed to freedom, so their schools should become committed in deed and symbol both to self-expression for every personality and to building democratic institutions that alone make self-expression meaningful. Nor are democratic institutions always equated with traditional forms of economic life. Actually, the people of Puerto Rico, if our panels speak for them, are more than sympathetic to economic patterns that increasingly vary from those forms.

By the same token, we cannot assume a one-to-one correlation of democratic institutions with established political arrangements. Certainly it is not national sovereignty that distinguishes such institutions. Nor, for that matter, is it necessarily either Commonwealth or statehood. Final commitment to one or the other, we suggest, is not as yet essential. This issue may soon enough be superseded by the larger, more crucial one of Puerto Rico's place in a whole network of international-political relations. Many already believe that enforceable world order must eventually replace the chaos of competing nations. The schools could help through critical study and discussion to build an informed public judgment on this most vital question—very soon to be, perhaps, a question of life or death.

Meanwhile, as a policy of widening democratic socialization and designed, decentralized “garden communities” expresses the interests

of the great majority, and as the objective of international government becomes congenial to that majority, these should be embodied in Puerto Rico's educational philosophy. We urge the necessity of such embodiment. It is one of the best guarantees against those demagogic dangers which respondents properly feared.

But let us be equally forthright in the insistence that commitment to cultural, including socioeconomic and political, goals does not exempt them from searching criticism. As a number of respondents insisted, dissent is itself an axiom of democratic freedom. The experimental practices of, say, the welfare state require constant vigilance—a responsibility that education, rightly understood, should be more competent to exercise than any other agency. So, too, with all other goals of the Puerto Rican order. Commitment in terms of public policies is entirely compatible not only with the right to criticize or deviate, but even to repudiate those policies should a minority of critics succeed in persuading the majority of their own persuasions. Here is a risk that freedom demands.

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part three

EDUCATION FOR ECONOMIC DEVELOPMENT

The case for education as a factor in economic development rests upon practical grounds: It is a good investment. In fact, the available evidence indicates it is a very good investment. The logic for the case in brief is this: Much of our economic growth can be explained by increased investments in land, labor, and capital. But our rate of economic growth has far exceeded the returns from increased inputs in these conventional objects of investment. How, then, is the difference to be accounted for? As Theodore W. Schultz and others have pointed out, the difference is very likely due to the added investments in the education of people and the resulting increase in their knowledge, skills, and productivity. Educated human resources invested in economic activity generate increased wealth. One of man's best investments, the evidence suggests, is in himself.

What the economists are now demonstrating with ever greater precision about the returns on investments in education has long been intuitively suspected by the consumers of educa-

tion. Americans themselves, who have never been known for their reverence for the intellectual or esoteric aspects of education, have from the beginning used education as a means of "getting ahead." Parents in practically all levels of society have urged education upon their children in order that they could have "the opportunities I missed" and "really make something of themselves." The currently swelling tides of enrollments are obviously compounded of many causes, both social and economic, but strongly apparent is the continuing recognition that education, now more than ever before, is the open door to widening economic opportunities. And conversely, perhaps less apparent, there is also the recognition that without education the doors are closed, as we are painfully aware in the case of drop-outs and underprivileged groups that, usually for a host of reasons, have been denied access to education.

Nor have the consumers of education in the underdeveloped countries missed the point. The plaintive cry of the villager about his son's future, "Without an education how can he escape my miserable fate?" seems to be in tune with the historically American attitude toward education. Although in the village the conception of education may be wrong, the faith in it blind, and the chances for disillusionment great, nevertheless the judgment is there, that in a modernizing world economic satisfaction for the individual lies through education's gate.

The intuitive, sometimes almost uncanny, judgments of the consumers of education in the developing countries about the economic value of education are worth listening to. They should not be written off lightly, for these judgments can tell educational planners much that they need to know about the nature of the demand for education, its changing directions and, most importantly, about the economic relevance for the consumer of the educational programs being offered.

The consumer evaluation of education can be expressed in many ways and determined by many methods. One way to study it is to examine enrollment trends. It must, of course, be recognized that enrollment profiles do not always reflect the personal choice of the consumer of education. They may only reflect available school places in those situations where the "play of the market" is restricted, and educational opportunities are in short supply. Wherever parents and students can, how-

ever, exercise some selection and where *alternatives* are available, enrollment trends in the different levels and types of education can be meaningful expressions of economic aspirations on the part of the consumers. More importantly, they may reflect changing trends in the economic and employment demands for graduates that the economic and educational planners may miss. In an age where education is increasingly judged by its economic utility, we should not be surprised when ordinary citizens develop rather keen discriminations about what is good educational investment for them and what is not.

It is also interesting to note that these consumer judgments may prevail even against the strongest pressures to change them. If consumers of education have determined that the incentives lie at the end of a specific band of the educational rainbow, they will regard as interference and discrimination the efforts of planners to divert them. The repeated efforts of planners to divert graduates away from white-collar government service and into blue-collar vocational pursuits is a case in point. In those countries where government service is economically attractive and socially prestigious, efforts to divert streams of students toward other pursuits have had only moderate success in and of themselves. Why? Because the educational planners took into account only one or two aspects of the matter and neglected the most important. They attempted to change the size and character of various educational enrollments without changing the system of economic incentives that attracted students to those enrollments in the first place. The consumers of education were not deceived. They were motivated by the incentives that still obtained for those who could run the course, although what they led to might have become harder to get.

Further evidence of the discriminating ability of the consumer in relation to the economic value of education can be seen in those countries where there are growing economic incentives for skilled workers and middle level technicians. These technicians are being trained in vocational schools, which are usually at the bottom of the educational pecking order. But the wages and salaries of the graduates are frequently now exceeding those of government clerks and other white-collar workers. The shift in enrollment trends in these situations is illuminating to observe. Vocational schools that when they opened, had to

recruit students, and poor ones at that, now have long waiting lists, and among those waiting are superior students.

The conclusion would seem to be that what the economists are now verifying by objective methods and procedures has long been assumed to be true in an intuitive way by the consumers of education, and that the very rate and kinds of consumption of education can be a useful indicator of what is happening, from the point of view of economics, in the market for education.

The use of education for economic development requires: (1) a national policy that recognizes that education is a requirement for economic development, and (2) consideration of the specific characteristics education must possess to facilitate such development.

What are some of the elements of a positive policy of education for economic development?

1. National policy must be directed toward economic growth. Only those who have never seen, or are insensitive to, poverty and deprivation would withhold every available means for eradicating them. The romantic concept of the happy primitive is a myth (compounded largely of nostalgia and class snobbery). The basis of the good life, no matter whose good life it happens to be, is always minimum human standards of health and decency.
2. A policy for education for economic development will recognize that education is inevitably intertwined with total development. Lest we deceive ourselves, we should remember that development is a whole process that must be directed by both economic and non-economic values.

Education is but one thread in the fabric of development. Whether it strengthens that fabric depends upon the way it weaves itself throughout the whole. Education alone cannot create development except as it relates itself meaningfully to all the other factors of development. No more critical matter rests on the agenda of unfinished business in the study of development than to learn more about how education can relate itself significantly to the total fabric of economic development.

3. Education for economic development must be so planned that it helps to spread economic opportunity and returns to ever widening groups in the society. One can rationally argue the validity of deliberately creating economic advantage in one

group, and at the expense of another group within the population, for the sake of economic growth. The incompatibility of this rationale, however, with a democratic creed need not be labored. Democratic planning should seek to minimize inequity and maximize equity.

4. Designing education for the economic improvement of all does not suggest necessarily, however, a policy of equal educational investment applied equally to all. This point raises great confusion and has obvious political overtones. The clamor for education everywhere has been noted repeatedly in this volume. Education is good politics and few politicians can do other than fight for its extension if they wish to survive the next election. The politically egalitarian thing to do, therefore, would be to spread educational investment equally among all segments of the population.

But, although such a plan may have political appeal, it is not one of the best ways to develop the educational system for economic ends or even to assure the spread of economic affluence. There is a good possibility that the benefits of economic development may spread faster to the total population if another course is chosen for education. The strategy of educational investment must take into account the manpower needs of the country, the levels of education capable of supplying these needs, the strength of various levels of the educational system in relation to their contribution to economic development, and the relative size of the various educational enrollments as well as other factors that influence the returns on educational investment. Although a policy goal should be the ever widening spread of economic benefits, the possibility of reaching the goal may actually be decreased by equal educational expenditure on all segments of the student population at any given time.

5. If a policy for education for economic development should take factors like those mentioned above into account, it must do so with economy as a central guiding purpose. By economy we mean the prudent application of scarce resources to educational programs in such a way that the maximum return on the economic investment is realized. The policy must define the economic ends sought and then devise economizing means for the achievement of those ends.

6. The policy should somehow take into account the social and cultural factors in education that contribute to economic development and provide for them in educational planning. There is general recognition that "other" than economic factors contribute to economic growth, but we have not learned to quantify these other factors. Educators and other social scientists must now apply themselves diligently to defining these factors with as much precision as possible. We must work toward constructing a unified theory that incorporates both the manpower and cultural aspects of development.

7. A policy for education for economic development will require that research and experimentation and untested assumption be the basis for educational planning, rather than hunch. If education is to have economic relevance, it must be guided by relevant research. Research is badly needed to shed light on many factors in education that need to be tested for their economic value; for example, vocational and technical programs, general education programs, and costs in relation to educational productivity.

8. Finally, education for economic development must be planned with due regard for its social consequences. It must be a socially responsible policy taking into account, to the extent possible with the knowledge available, the social results of various courses of educational action. In sum, it must be a policy of education for *more than* economic development. It must be a policy of education for *total* development, in which economic development finds its appropriate place.

Let us turn now from policy considerations on education for economic development to some of the specific ingredients of systems and programs that aspire to contribute to economic development. At this point we move into really very difficult areas for decision and the necessity to make judgments about the organization and administration of education, selection of students, recruitment and training of teachers, construction of curricula, and the evaluation of results.

Initially one is tempted to say that education that is "good" by the usually accepted standards will be good education for economic development. And we do not have evidence that this is not true. But the statement lacks precision and fails to meet some

of the critical issues involved in any attempt to describe education that is supportive of economic development.

What are the parameters of education that may be regarded with more assurance as contributing to economic development? With the present state of our knowledge, the areas of certainty are small. We can say with some confidence that investment in man is a vital component of economic growth, but precisely the kind of education best suited for that purpose, its specific ingredients, and the methods for establishing those ingredients within an educational system are only vaguely known to us. Nor do we know much about how education is related to all the other factors in development. In view of the paucity of our knowledge, what follows should be regarded only as probings toward a future of more certain knowledge and an attempt to give more precision to what needs to be known.

What are some of the characteristics of educational systems that seem to be supportive of economic growth?

1. They are open rather than closed systems of thought and behavior. The manner in which education is conducted may in the long run be more significant for economic development than the actual content of what is taught. It is easy to conclude that in order to reorient an educational system in terms of economic needs, all one has to do is to change the curricula or reorganize the administration. This might be an easy way, indeed too easy, to cope with the complex problem at hand. Education for development is indeed concerned with specific knowledge and skills, and in a technological society it must meet the most rigid intellectual requirements. But education is more than a body of knowledge or the acquisition of it. It is an approach to the creation of knowledge, the use of knowledge, a way of handling, testing and applying it. This concern for the *production* and use of knowledge, rather than the knowledge itself, may be the key to education for economic development.

If this be true, we then need educational systems that are conceived as open doors to the acquisition of new knowledge through the application of existing knowledge. Taken seriously, such an approach to learning calls for new, revolutionary thinking and practices about the conduct of the whole enterprise.

2. Economically relevant education offers viable programs of quality in the vocational, technical, scientific, and professional fields that are adapted to the country's stage of development. Perhaps the greatest pitfall in this area is that developing countries attempt to copy without modification the advanced technical programs of developed countries, whether or not they are suited to the local conditions. Some practical questions need to be raised. In a country short of doctors, medical technicians, and nurses should the standards for selection and training requirements for these professions be the same as in advanced countries? What are the most appropriate sciences for the developing country to teach, the political attractiveness of the atomic sciences notwithstanding? Should the requirements for teacher training be the same as in an advanced country, when one considers our own long evolutionary history in this matter? At what levels should vocational education be pitched in order to yield the largest return on the investment? In a country that is moving out of the handicraft stage, is it economically feasible to continue spending large sums on vocational schools whose curricula are based upon handicrafts?

These problems of strategy aside, there would seem to be good reason for developing countries to put considerable energy and resources into designing educational programs that are explicitly geared to known manpower needs in the technical and professional areas.

3. Such programs are characterized by a balance of vocational and general studies. The balance cannot be the same for all developing nations, for traditions and cultural expectations bear upon this problem. Somehow, however, within its unique traditions a country must decide what portion of the educational program will be explicitly job-oriented and what share will be devoted to general learning.

It is perhaps too easy for developing countries to jump to the conclusion that their educational problems can be solved by vocationalizing the system and diverting increasingly large numbers of students into vocational and technical fields. Experience does not substantiate the hope. There can as easily be a surplus of vocational graduates as there can be of arts graduates. The problem is further complicated if the vocational graduates are narrowly trained for specific highly-specialized

jobs and are unable to transfer their talents to other sectors of the jobs market where employment may be found.

4. Education for economic development values the discipline of work. Economic development is dependent upon production made possible through work. Educators of the developing world need to ask themselves whether they are in fact teaching the discipline of work or simply the skill of survival. The question may be appropriately raised by and for Western educators as well. But the contrasts between the pace and work requirements of educational institutions in the Western and non-Western worlds do pose some intriguing questions. The little used books and libraries, the leisurely and sometimes erratic pace of instruction, and the periodic fever of examination passing pose fundamental questions about what is taught about work in the achievement of goals. Development carries various price tags and one of them is work.

In this part on education and economic development, we have selected statements clustering around three basic questions and have devoted a chapter to each one of them. Education for economic development is by its very nature an investment in people. We need to ask first: What are the returns on the investment? Is it a good investment? Can the methods that have been devised for studying the economic value of education in America be applied with equal validity to underdeveloped countries? And if we are going to invest in people, what are the best strategies for doing so?

The second set of selections clusters around vocational and technical education. Vocational education assumes crucial importance in all developing countries, and there is a desperate need for policy to guide its development. Two quite opposite policy approaches are illustrated in the chapter on vocational education and economic growth.

Finally, we need to look at the non-economic factors, the human equations, that always condition progress in economic development. Those non-economic motivations that move men to behave as they do may, in the final analysis, determine far more than we suspect the nature and rate of economic growth. With these, too, education must be concerned, as the last chapter in this part will indicate.

chapter 5

Education as Investment in People

5-1. Returns on the investment

"During the last three decades, schooling has been a larger source of growth than material capital represented by structures, equipment, and inventories as presently measured."

THEODORE W. SCHULTZ

Education, we said, may be viewed as man's investment in himself, his abilities and growth. Through education we nurture the abilities of the child and extend those of the adult. New skills and aptitudes are developed through education, and by it conditions for change are fostered. Certain capabilities developed through education have economic value and we may properly ask: How much value? In other words, what is the economic value of education? In the following selection Theodore W. Schultz gives us a measure of education as a contributor to the economic capabilities of people. The invaluable contributions of Schultz and his colleagues to the economics of education are the means devised by which the economic value of education may be measured. In viewing education as an investment, they are using the economist's tools to render more precise our knowledge about the contributions of education to economic growth. Their work also raises some sharp questions about the efficiency and productivity of the

internal operations of education, a subject on which Schultz in the following selection declines to comment. It would be well, however, for educators not to decline the opportunity to confront squarely the issue of the efficiency and productivity of the educational enterprise with respect to the investments going into it. The time may be passing when educational systems can sidestep these issues by claiming that "education lies beyond the economic calculus," as Schultz puts it. Education has the obligation to be efficient and productive in terms of *both* the economic and non-economic values derived from it.

[Theodore W. Schultz]

I am aware that an essay on the economic value of education will seem presumptuous to many school people and to some economists. Those who value schooling highly, which includes most of those who are a part of the educational establishment, are likely to look upon an effort such as this as an intrusion which can only debase the cultural purposes of education. In their view education lies beyond the economic calculus, because they believe that education is much more than a matter of costs and returns. To speak of schooling as an investment is to imply that it is something material. The notion of "efficiency" is a red flag in most school circles and often for good reasons when it is implied that an efficiency expert from business or a foundation is qualified to evaluate teaching and learning.

But on the latter issue I may be spared because I have little to say about "efficiency" within schools. It will become clear as I proceed that there are other important economic questions related to schooling which I propose to investigate. When these questions have been clarified, I am sure it will allay the apprehensions of school people. It will become clear that there are important economic dimensions to education that have not been fully recognized and that these dimensions augment substantially the value traditionally attributed to schooling and to on-campus research. . . .

This essay rests on the proposition that people enhance their capabilities as producers and as consumers by investing in themselves and that schooling is the largest investment in human capital. This proposition implies that most of the economic capabilities of people are not given at birth or at the time when children enter upon their schooling. These acquired capabilities are anything but trivial. They are of a magnitude to alter radically the usual measures of the amount of savings and of capital formation that is taking place. They also alter the structure of wages and salaries and the amount of earnings from work relative to the amount of income from property. There are long-standing puzzles about economic growth, changes in the structure of wages and salaries, and changes in the personal distribution of income that can be substantially resolved by taking account of investment in human capital. . . . For purposes of economic analysis, a distinction is drawn between the consumer and the producer values of schooling, as I did in the introductory chapter. The contributions of schooling to consumption are then divided into those that serve consumption in the present and those that contribute to future consumption, and the latter become an investment. The producer values of schooling are straightway an investment in future capabilities to produce and earn income. Thus, in classifying the benefits of schooling, there are three conceptual boxes: (1) present consumption, (2) future consumption (an investment), and (3) future producer capability (also an investment). How large is each? No one really knows. There are studies that begin to show that the third box may be very large. Meanwhile, there are many signs that the other two may not prove to be empty, but what these signs really mean is as yet not known. As one gives thought to the taste, level of income, and costs of education in the United States, it would seem that only a small box is required for consumption in the present, while large ones are needed for the other two classes of contributions of schooling, both of which are investments.

If all of the fruits of schooling entered directly into final consumption, additional schooling would not contribute to economic growth. More schooling would show up only in what people consumed as they responded to changes, including the rise in their income associated with economic growth. If, however, all of it took the form of enduring consumer capacities, additional schooling would enhance future well-being, but it would not appear in *measured* economic growth. Although real income would increase in terms

of consumer satisfactions, the additional satisfactions from the investment in these enduring consumer capacities are not included in measured national income. Only if schooling increases future productivity and earnings do the contributions of schooling become a source of *measured economic growth*.

Again, it will be necessary to refer to the distinction between schooling and the educational establishment, because the schools which make up the educational establishment engage in a number of activities, the value of which does not enter into schooling, and because the value of schooling to the student depends in no small part on the efforts of the student to learn. It is all too easy to become bound to "teaching" and "learning" or to levels of schooling and classes of schools and miss some important functions of education. I propose, therefore, at this point to comment briefly on some of these functions.

Major functions of the educational establishment

1. Research is one of the traditional functions of the educational establishment. The National Science Foundation reports that in 1961 the professional staff of colleges and universities engaged in "basic" research in science was 45,000 full-time equivalent, with an assisting staff of 35,000 full-time equivalent. The total costs of this research in 1961, including salaries, overhead, equipment, facilities, and information, came to \$0.9 billion. According to the NSF, half of all of the "basic" research in the United States was being done within colleges and universities. (Of the rest, a fourth was credited to other nonprofit institutions and the federal government and the other fourth to industry.) What is the value of this particular activity of colleges and universities? Although the NSF has developed a useful series of annual estimates of the costs of this research, it has not as yet succeeded in estimating the economic value of the research results. A classic study by Griliches¹ shows that the investment in hybrid corn research was yielding the U.S. economy, as of 1955, a return of about 700 per cent per year. An estimate of the payoff to agricultural research as a whole suggests a rate of return of at least 35 per cent a year. Denison attributes about 18 per cent (net) of the growth rate of the U.S. economy between 1929 and 1957 to advance in knowl-

1. Zvi Griliches, "Research Costs and Social Returns: Hybrid Corn and Related Innovations," *Journal of Political Economy*, 66 (October, 1958), 419-31.

edge.² But what about that part of the advance in knowledge which originates from the research that is done in the colleges and universities? As yet, no one knows.

2. The educational establishment discovers and cultivates potential talent. The capabilities of children and of mature students can never be known until they have been found and cultivated. Eckaus presents the basis of this proposition succinctly: "It just does not seem to be true that human talent will always appear no matter how discouraging the environment and inadequate the cultivation. One of the functions of the educational system is to act as a mechanism for searching out and selecting potential talent." The analogy with expenditures for exploration is close indeed. It is well known that it pays to invest in oil exploration and in the improvement of extraction techniques. Similarly, it "pays" to have an educational system that is organized to discover human talent and that seeks to improve its techniques for achieving this objective. Reisman sees this function of education in depth and, also, how subtle the process is.

3. Schooling increases the capability of people to adjust to changes in job opportunities associated with economic growth. When an established worker faces such adjustment, he may have to leave his present occupation and enter upon another, and he may also have to migrate out of a declining sector to one with better job opportunities. The large movement of people out of agriculture, made necessary because of the rapid rise in the productivity of labor in farming and because of the slow increase in the demand for farm products, dramatizes the importance of these adjustments. Under widely different circumstances, it is true that individuals with 8 years of elementary schooling are better prepared to move and enter upon new jobs than are those who have had only 4 or less years of schooling. Likewise, those with a high school education are much better prepared to make such adjustments than are those who have completed no more than the elementary grades. Economic growth, under modern conditions, brings about vast changes in job opportunities.³ Schooling in this connection is valuable because it is a source of flexibility in making these occupational and spatial adjustments.

2. When adjusted for sources which had negative effects, it is slightly over 18 percent.

3. In view of the divergency between private and social costs and returns in such situations, I have proposed "A Policy to Redistribute Losses from Economic Progress," *Journal of Farm Economics*, 43 (August, 1961).

4. Schools also recruit and instruct students for teaching, a traditional function of education. Even if all schooling were only for final consumption, teachers obviously would be required, that is, individuals with specialized learning—philosophers, scientists, and scholars for academic instruction and teachers for secondary and elementary schools. An investment would have to be made in this class of human resources in order to have the consumption already referred to. In 1956 teachers represented 2.3 per cent of the employed labor force in the United States. Also relevant in the number that prepare for teaching is the fact that many elementary and high school teachers leave teaching after working at it for only a few years; the dropout rate of teachers is very high. The instructional staff for public schools may be 1.8 million by 1969, a rise of 26 per cent during the decade of the sixties, and the number of professional scientists and engineers who teach is projected to 175,000 by 1970, representing an increase of 75 per cent above that of 1961. Although one can readily identify these individuals and count them, the numbers by themselves do not tell what the skills and knowledge of this class of human resources are worth. Inside academies, there are mercenaries who entertain the thought that the pay is too low!

5. A commission report for Nigeria, *Investment in Education* [28], takes the stance that it is a part of the duty of an educational system of a country to meet the prospective needs for people with high skills and knowledge. The report proceeds to build on estimates of the future demand for high level skills of the rapidly growing economy of Nigeria and on the recommendations of Frederick Harbison. Harbison stresses the key role of "high level manpower" in economic development, especially in low income countries. He uses a technique for estimating these prospective demands based on a combination of observable trends and simple projections. Such estimates of future high level manpower required can then be treated as goals for the educational system.

It is indeed one of the functions of education to serve a country in these respects. Much can be said for the Harbison approach where large changes and a rapid expansion in schooling is necessary to provide the skilled labor which a growing economy will soon need. An approach based on investment in schooling and on prospective returns, while more in line with the logical requirements for determining an optimum allocation and rate of return to investment, is much less direct and perhaps more difficult to apply under circum-

stances that characterize new nations launching programs to hasten their economic growth.

Education as a source of economic growth

"Economic growth" has come to mean increases in national product, measured in constant "dollars." The study of this growth is presently high on the agenda of economists, not because of any commitment, naive or otherwise, to growthmanship but because of an increasing public concern about growth. But it has not been possible to explain the observed growth by the observed increases in conventional factors of production. The best clues are the improvements in the *quality* of factors, both man and machines, and in economies of scale. The amount of schooling, which has been rising rapidly, is being analyzed to see what effect it is having on the productivity of human effort. The contributions of university research to science and technology are also being examined to discover the extent to which they are a source of economic growth.

ARITHMETIC OF SCHOOLING AND GROWTH

To clarify some general relations between schooling and economic growth, let me assume for sake of convenience that all schooling is an investment in earnings, that the rate of return is the same to each level whether it is elementary or a higher level of schooling, and that the number of workers remains constant. Under these simplifying assumptions, if the capital stock of schooling per worker were not to rise, schooling would not be a source of economic growth.

Once a country attains a high level of schooling, although it would undoubtedly require much schooling to maintain it and the annual investment in schooling would be large, schooling would obviously no longer be a source of economic growth. Also, however low the level, unless it is raised, schooling is not a source of growth. Yet, starting from a low level, there are large possibilities for raising it. If the level were raised substantially and rapidly, then during such a period schooling would be a substantial source of growth. Also, under these assumptions, adding a year of high school per worker increases the capital stock of schooling in the labor force much more than adding a year of elementary schooling. In the United States presently, as an investment, a year of high school costs about five times as much as a year of elementary schooling. All of these rela-

tionships are based on what happens to the capital stock of schooling per worker. Once the assumption with respect to the constancy of the size of the labor force is relaxed, then, even if per worker schooling were to remain unchanged, any increase in the labor force would increase the total capital stock of schooling and to this extent it would become a source of economic growth.

To illustrate the arithmetic of growth, take an economy with a 3 per cent growth rate. Let the share of the national income earned by labor be 75 per cent and let additional schooling during a year increase the productivity and earnings of labor by 1 per cent. Schooling would then add 0.75 of a percentage point to the growth rate, which would represent one fourth of the total growth rate of 3 per cent. (There also would be the additional schooling represented by any increase in the labor force that occurs.) As to the investment aspects, let the real earnings per worker be \$4,500 and the costs of the investment in the additional schooling which increases productivity and earnings by 1 per cent be \$450. The implicit gross rate of return, disregarding depreciation and obsolescence, is then 10 per cent, simply because a 1 per cent increase in earnings on \$4,500 is \$45 and thus a 10 per cent rate of return on the \$450 invested.

ESTIMATES AND IMPLICATIONS

Two lessons may be drawn from studies that have been made of schooling as a source of economic growth. During the last three decades, schooling has been a larger source of growth than material capital represented by structures, equipment, and inventories as presently measured. The other lesson pertains to earlier decades and to the decades ahead. Between 1909 and 1929, as will be shown below, schooling played a much smaller role in growth than it has since then. During the next two decades the prospects are that schooling will continue to be a major source of growth, but beyond that it will not be possible to keep on increasing the capital stock of schooling at the rate which has characterized recent decades.

The rapid rise in schooling of members of the labor force in the United States accounts for about a fifth of the measured growth between 1929 and 1957. Years of school completed per person in the labor force rose from 8.41 in 1930 to 10.96 in 1957, which is an annual rate of 1 per cent. Days of school attendance per year also increased rapidly. Adjusting for changes in average number of days of school attendance, counting a school year as 152 days, based on 1940,

the equivalent school years completed rose from 6.01 to 10.45 between 1930 and 1957, which is an annual rate of slightly more than 2 per cent. For the period between 1930 and 1960, Denison shows an increase of 34 per cent in average number of years of school completed and also 34 per cent for the average number of days of school attended per year of school completed. The product of these two developments gave an increase of 79 per cent in the average total number of days of school attended, which is also an annual rate of increase of slightly more than 2 per cent.

A major, explicit assumption underlying the procedure used by Denison is the allocation of three fifths of the reported differences in earnings that correspond to differences in schooling to education. The other two fifths, it is assumed, is a consequence of associated characteristics. Suffice it to say that his procedure allocates about 21 per cent of the economic growth of the United States between 1929 and 1957 to education.⁴ The historical comparisons presented by Denison lend support to the following inferences with regard to schooling: (1) The contribution of schooling to growth between 1909 and 1929 was a little more than one half of that between 1929 and 1957. (2) The projected 1960-80 growth from this source is a little less than that between 1929 and 1957. (3) For the longer run, it is impossible to maintain the rate of increase in the amount of schooling achieved during recent decades. (4) Between 1909 and 1929, material capital contributed to growth almost twice that of schooling, but between 1929 and 1957, the contribution of schooling exceeded that of material capital.

My estimate of some time back for the period between 1929 and 1957, supports Denison. The approach that I used rests on estimates of the investment in schooling in people who are in the labor force and the rate of return earned on this investment. The first, expressed as a stock of capital in 1956 dollars, came to \$180 billion for 1930 and to \$535 billion for 1957. (A simple adjustment for trend indicates a stock of \$173 billion for 1929.) Thus, the increase in this stock of capital between 1929 and 1957 comes to \$362 billion. It should be

4. In Table 32 on the sources of the growth in real national product, he allocates 23 percent of the growth rate between 1929 and 1957 to education. This is a gross figure. Since there are among his "sources" some that have had a negative effect, his positive percentage points total 109, and the 23 percentage points attributed to education represent, therefore, about 21 percent of the positive sources of economic growth.

noted that this approach allocates none of the costs of schooling in the labor force either to present or future consumption. These costs are treated as if all were solely an investment in future earnings. Three estimates of the rate of return were attempted. The two lower rates come to 9 and 11 per cent. Applying these two rates to the increase in the capital stock of schooling of \$362 billion, I obtain slightly less than \$33 billion and \$40 billion respectively as the growth in national income from schooling. If the national product increased \$200 billion,⁵ this additional schooling in the labor force accounts for 16.5, or 20 per cent of the total growth depending upon whether the 9 or 11 per cent rate of return is employed.

GROWTH FROM RESEARCH

Measured by annual expenditures, half of the basic research in the United States is within the educational establishment. How much does this research contribute to growth? Suppose one were to treat it as an investment. What is the rate of return? The advance in useful knowledge relevant to agricultural production has been large during recent decades. The return to agricultural research, mainly research within the land-grant colleges and universities and the U.S. Department of Agriculture, has been high.⁶ For all basic research underway in colleges and universities, there are no useful estimates of return. At a much more general level, Denison attributed somewhat more than 18 per cent of the growth between 1929 and 1957 to advance in knowledge. To obtain this estimate, he allocated to this source the residual that he had left after accounting for all of the other sources which he had identified and measured. Obviously, his "advance in knowledge" includes several sources in addition to basic research. Nevertheless, the intuitive belief, widely held, that basic research is the mainspring to much useful knowledge and that the rate of return on it is high is presently the best basis for decisions, until ways are found of estimating these contributions.

5. In the essay "Education and Economic Growth," [19], the net national product estimates which I used rose from \$150 billion to \$302 billion in 1956 prices based on Kuznets' estimates. The adjustment implied by going to Department of Commerce estimates appears to indicate a growth in national income of about \$200 billion.

6. See President's Science Advisory Committee, *Science and Agriculture*, Agricultural Panel, January 29, 1962, Executive Office Building, Washington, D.C. (mimeographed).

Capital formation by education

From the evidence already presented, the picture is that schooling and advance in knowledge are both major sources of economic growth. It is obvious that they are not natural resources; they are essentially man-made, which means that they entail savings and investment. Investment in schooling is presently, in the United States, a major source of human capital.

5-2. Do investment models apply to developing nations?

"Growth rates derived from the experience of the United States cannot be used to calculate the returns on education in the entirely different setting of under-developed countries."

T. BALOGH AND P. P. STREETEN

The work of American economists in the economics of education has not gone unnoticed in the developing countries. The impact has ranged from that on vocabulary, where education is now referred to as an "investment" rather than as a "welfare expenditure," to that on budgets, where allocations for education are considered along with those for other development expenditures, such as agriculture, communications and power. The change is a wholesome one, for it places the development of a nation's human resources at least on a par with the development of its physical resources. This change, however, is not without its constraints. Both enthusiastic educational consultants from other nations and the leaders of the developing nations themselves have sometimes failed to read closely enough the work in the economics of education done in the West, and have accordingly considered it a sufficient

authority for calling for more education as the solution to all development problems. Current studies do not support so sweeping a generalization. There remains the hard business of testing what economic value education has for a particular country at a particular stage of development. In the selection that follows, T. Balogh and P. P. Streeten pursue with profit the question of the appropriateness of the American models for studying the economic value of education for the developing countries. As the authors point out, "their application to the problems of underdeveloped countries has bred confusion."

[*T. Balogh and P. P. Streeten*]

Carefully directed social expenditure can have a much higher total yield (including all secondary effects) than types of expenditure which may result in some imposing visible structure, but whose effects on output in other sectors of the economy are zero or negative. Expenditures on the health, education and feeding of workers, on the provision of information, the creation of skills, etc., can raise output considerably, if properly directed and linked with improved equipment and appropriate institutional reforms. But these expenditures have for long been recalcitrant to theoretical treatment because

- (a) they are permissive, creating opportunities for output growth without being its sufficient condition;
- (b) their direct output is often not easily measurable;
- (c) their effects are widely diffused;
- (d) their effects are spread over a long time;
- (e) there exists no determinate functional relationship between inputs and outputs, partly because success is contingent on complementary measures;
- (f) independent value, as well as instrumental value, is attached to both the initial expenditure and the resultant flow of satisfactions;

T. Balogh and P. P. Streeten, "The Coefficient of Ignorance," *Bulletin of the Oxford University Institute of Economics and Statistics*, vol. 25, no. 2 (1963), pp. 99-107. Reprinted by permission of Basil Blackwell, publisher.

- (g) considerations of 'deserved social rewards' enter into the determination of costs (e.g. teachers' salaries);
- (h) they cut across the traditional distinction between investment and consumption (on which many growth theories are built), according to which a sacrifice in current consumption can make future consumption greater than it would otherwise have been;
- (i) they are frequently correlated with other causes of higher productivity from which they are not easily separated.

Although many of these considerations apply, perhaps to a lesser extent, also to expenditure on physical capital, they are more glaring when social expenditure is considered and therefore social expenditures have been, until recently unpopular with model builders. But the bias which emphasizes allegedly measureable, separable and determinate, and neglects other types of relationship is unwarranted. Actions about whose results it is possible to make only the vaguest guesses may be much more important than actions whose trivial effects are supposed to be precisely foreseeable. The challenge of estimating the returns on certain types of social expenditure has been accepted, but in the process of analysing them the same mistakes have been made which have vitiated the use of more traditional concepts and relations, both in analysis and in their application to development planning.

In the last few years models have been constructed which attempt to isolate the contribution to growth made by expenditure on research, education, health, provision of information, etc. The starting point has usually been the addition of one term to the Cobb Douglas production function. $Y = aK^{\alpha}L^{\beta}H^{\gamma}$ where Y is the national income, K capital, L labour and H a ragbag term for 'human factor' including 'improved knowledge', improved health and skills, better organisation and management, economies of scale, external economies, changes in the composition of output, etc. a , α , β and γ are constants, and $\alpha + \beta = 1$. Thus whatever is not caught in variations of K and L is attributed to H . 'Improvement in knowledge' is a name for what has rightly been called 'coefficient of our ignorance'.¹

1. Mr. E. F. Denison, in his book *The Sources of Economic Growth* (Committee for Economic Development, 1962) simultaneously assumes a linear homogeneous production function and perfect competition in order to use average return per unit of factor as a measure of its marginal value product, and attributes a substantial proportion of 'residual' growth to economies of scale.

Whatever the value of these models for advanced Western countries, and however welcome the attempt to get away from preoccupation with physical investment, their application to the problems of underdeveloped countries has bred confusion.²

The reasoning behind these new models can be briefly summarised in this way: the increased use of one factor of production, while others are kept constant and 'knowledge' and 'skills' are given, will yield diminishing marginal returns. If the growth of national product over several decades is such that the expansion of land, labour and capital does not account for the whole increase, the remainder must be due to 'investment in human beings'.

Another approach has attempted to estimate the returns in the form of higher earnings to the educated in relation to expenditure on their education in the U.S.A. Both these approaches and others have seemed to show that the returns to this type of 'investment' are substantially above the returns to physical investment. The conclusion is then drawn that expenditure on education and on other ways of improving knowledge and skills should be carried out by planners in other countries, and particularly in underdeveloped countries.³

The pitfalls and fallacies in this admittedly over-simplified chain of reasoning are too numerous to be discussed here in detail. In the models of an aggregate production function a relationship, based on

2. For a brief discussion of and reference to these attempts, see John Vaizey, *The Economics of Education* (London 1962) chapter III. For criticism of the application of these models to underdeveloped countries, see T. Balogh, 'Balance in Educational Planning: Some Fallacies in Current Thought,' *The Times Educational Supplement*, June 8th, 1962, and 'Misconceived Educational Programmes in Africa,' *Universities Quarterly*, 1962.

3. Thus Mr. Adiseshia, Unesco's Acting Director-General at a United Nations Association in Cambridge said: 'So my thesis is that accelerated economic growth is, to a large degree, a function of adequate and commensurate development of human resources . . . the expenditure in formal education, in training, in mass media and in research and development leads to increased returns both to the individual and to the community. . . . The return from education over a 12-year period to the individual, expressed in terms of the relation between the amount invested by him and/or his parents and his higher earnings in the future, can be averaged at 16 per cent gross or, if allowance is made for income forgone while at school or college, the net average would be 11 per cent. Similarly, a two-year training course increases future earnings by around 6 per cent gross or 3 per cent net.' *War on Want* (Pergamon Press, 1962).

Paul G. Hoffman, the head of the United Nations Special Fund, was reported in the *New York Times* of October 21st, 1962, to have said: 'Possibly the greatest change in my own thinking is my widening recognition of the financial return from secondary education. Leadership must come from people with at least 12 years of schooling.' John Vaizey, in a letter to *The Times*, March 14th,

static economic models, is assumed between capital, labour and output; the historically observed relationship in advanced countries is seen to diverge widely from the assumed relationship, and the difference is postulated to be due solely to 'improvements in knowledge'. This conclusion is then bodily transferred to a totally different technical, historical, cultural, religious, institutional and political setting. Even if improved knowledge were a necessary condition for production growth, it might yield output only if incorporated in machines, exploited in specific ways, or combined with other policies, but not if occurring in isolation. Nor is education a homogeneous input. The teaching of Sanscrit has different results from the teaching of land cultivation. The teaching of book-keeping may increase the efficiency of manual labour, while the teaching of certain religions may reduce it. Isolation of 'education' from other measures ignores the importance of co-ordinating policies, and aggregating all types of 'education' obscures the type of education required for development. The concept therefore suffers both from illegitimate isolation and from misplaced aggregation.

Similar objections must be raised to the models attempting to calculate the returns to education by discounting the excess earnings of the educated over those of the uneducated. The American data, which are mostly used, do not provide evidence as to whether expenditure on education is cause or effect of superior incomes; they do not show, even if we could assume it to be a condition of higher earnings, whether it is a sufficient or a necessary condition of growth,⁴ and they do not separate monopolistic and other forces influencing differential earnings which are correlated with, but not caused by, differential education.

The calculations based on these data ignore both the indirect (financial and non-financial) returns accruing to others than the educated individual, and the direct non-financial returns to the individual. On the other hand, they pay a good deal of attention to 'income forgone during study' which constitutes a large proportion of the

1963, quoting the study of Edward F. Denison. 'Of an average percentage rate of growth in G.N.P. from 1929 to 1957 of 2.93, education contributed 0.67—far more than any other factor. In 1957 the typical United States male adult worker over 25 years of age had two and a half times more education than his counterpart in 1910. The implications for Britain are obvious. . . .' The recent emphasis on expenditure on education has occasionally been accompanied by an equally unwarranted depreciation of the importance of physical capital.

4. Industrialisation in Britain preceded general compulsory education.

costs of 'investment'. But neither the income forgone by other groups in society (housewives, voluntary workers, people such as some university teachers—accepting a lower income than they could get in other occupations), nor the non-financial benefits enjoyed during education are estimated. Since the time-flow over a lifetime of the earnings of the educated is quite different from that of the uneducated, lifetime earnings now must be calculated as returns on education in the nineteen-twenties. To conclude from those returns anything about today's returns is like identifying a crystal radio set with Telstar.

Assuming that the ratio of returns to costs reflected something significant, it would be rash to attribute it to education. Expenditure on education is highly correlated to income and wealth of parents, to ability and motivation, to educational opportunities such as urban residence and proximity to educational centres, to access to well-paid jobs through family and other connections, any one of which could, either by itself or in conjunction with any of the others, account for the superior earnings.

But monopolistic elements enter not only in the differential advantages enjoyed by the children of wealthy parents, but also in reaping the rewards of an education. How much of the differential earnings of lawyers and doctors is due to 'investment in men' and how much to restrictive practices concealed as requirements of qualifications? Much of the higher earnings is not a return on education but a monopoly rent on (1) the scarcity of parents who can afford to educate their children well and (2) the restrictions on members permitted into a profession in which existing members have a financial interest in maintaining scarcity.

If anybody attempted to use these models for calculating the returns to education in many underdeveloped countries he would discover even higher rates of return. All this would show, however, is that pay scales in the civil service, in universities and in the professions are still governed by the traditional standards of a feudal or colonial aristocracy and by natural or artificial restrictions. It would provide no clue as to how public money ought to be distributed between 'investment' in 'physical capital' and in 'people'.

This approach, though logically weak, not only appeals to the snobbery and flatters the self-esteem of the educated, appearing to provide an economic justification of existing income differentials, but also buttresses vested interests. The specific measures that would be required to make expenditure on technical and agricultural edu-

cation effective are painful, they violate vested interests and run into numerous inhibitions of the planners and obstacles put up by the planned. What a relief then to be served by econometricians with an elegant model, and how convenient to elevate a statistical residual to the engine of development, thus converting ignorance into 'knowledge'. Instead of having to specify *which type of education combined with what other measures* (such as investment in improved methods of cultivation, provision of the right equipment), creating skills and ability and willingness to work efficiently, and *complemented by what other policies* reforming attitudes and institutions (land reform, reform of the credit system, the civil service, price guarantees, transport), one item is singled out, either as the necessary and sufficient condition or as principal strategic variable of development. But the wrong kind of education, unaccompanied by the required complementary actions, can check or reverse the process of development. An unemployed or unemployable intelligentsia can be a source of revolutionary rather than economic activity, and young people brought up to despise manual work can reinforce the resistances to development.⁵ Growth rates derived from the experience of the United States cannot be used to calculate the returns on education in the entirely different setting of underdeveloped countries. The same 'input' could result in refusal to work on farms, an increase in urban unemployment, subversion and collapse. The wrong type of education can also produce a ruling elite which gives the wrong kind of advice, as well as setting up ideals that stand in the way of development. It can encourage ignorance of and contempt for the professional and technical qualifications which are a condition of economic development.⁶

5. Wilfrid Malenbaum, for instance, found that unemployment in India varies directly with the degree of higher education. See "Urban Unemployment in India," *Pacific Affairs*, XXX, No. 2, June 1957, p. 146. Quoted in Gustav Ranis, 'Economic Development: A Suggested Approach,' *Kyklos*, Vol. XII, 1959, Fasc. 3, p. 445. In Mexico experiments have shown that investment in rural schools may not result in increased production or changed attitudes. For a discussion of the hostility to development generated by education and intellectuals see Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, pp. 152 ff.

6. The importance of the *type and composition* in contrast to the *total* of social expenditure is particularly glaring in the field of health: expenditure on death control which simply reduces mortality rates has a negative effect on per capita growth rates in many underdeveloped countries, whereas expenditure on birth control and improved health which raises vigour and reduces apathy has a posi-

Aggregation of all 'investment in human capital' and its separation from 'investment in physical capital' not only obscures the complementary nature of most subgroups of the two, but also serves as an intellectual and moral escape mechanism from unpleasant social and political difficulties.

New types of models are beginning to appear in which the returns yielded by expenditure on research and development, on training in management and administration, perhaps even on psychological treatment to transform tradition-bound into 'achievement-motivated' personalities are calculated. But as long as crucial distinctions are blurred by aggregation, crucial connections severed by isolation, and historical and geographical differences neglected, the results will be useless or misleading.

One group of critics have attacked the sordidly mercenary approach to activities of high intrinsic value, saying that it is a perversion of values to calculate rates of return on what is, or should be, the ultimate end of all production. But these criticisms miss the point. The chief conclusion of most of the recent researches is that not enough is spent on education. The high independent value of education itself and of the consequent flow of independently (i.e. not instrumentally) valued satisfactions may be used as an argument against not spending enough, but it cannot be used as an argument against spending at least as much as would yield a return equal to that on physical capital. It could, of course, be said that once mercenary calculations are admitted, the relative values of different kinds of education will be assessed by the wrong standards, and that the sense of the value of education will be lost, the more accurately its price is known. Already some authors argue that the returns on education in certain countries are lower than those on physical capital.

But the fact that we attach both independent and instrumental value to certain activities and that we attempt to estimate, if and when this is possible, the instrumental value, need not detract from the independent value. If the two reinforce each other, there can be no cause for complaint, and if they don't, it is surely rational to know the costs of policies promoting independent values.

The objection to the models is therefore not that they degrade education and equate human beings to machines. Better knowledge

tive effect. The same is true of expenditure on education. Education which breeds religious aversion and snobbery yields a selection mechanism and policies which have income-depressing effects.

of the productive potential of human beings would raise, not lower, human dignity, human choice and human freedom. The objection is that the models approach the problem in the wrong way.

The faulty isolation of one tributary to the stream of production and the aggregation of different channels, some of which flow in opposite directions, some of which are stagnant and some of which do not contain any liquid, does not imply a disparagement of the need for detailed quantitative planning, including the planning of education, which has particularly long gestation periods. Whether a particular theoretical model is worth constructing depends upon whether we can give sufficient precision to the definition of the parameters and the variables and whether we can estimate the numerical relations between them. The rigour which is claimed for mathematical models is an illusion if the terms which they contain have no clear reference to the relevant items.

In the process of criticizing misplaced aggregation, such as that which lumps all education into a single category, we are led to the formulation of less general concepts: education is subdivided according to where it takes place, in what subjects, at what level and to whom. The purpose of such decomposition, disaggregation and subdivision is not to restrict analysis to less general concepts. We are, indeed, first trying to get rid of ragbag terms which do not correspond to anything observable and to replace them by 'boxes' that can be 'filled'. But as the boxes are being filled and as we gain fuller empirical knowledge, we may look forward to the formation of new aggregates and to the recombination of the decomposed material in a different form. The new 'packages' or 'boxes' will differ from the old. Some of the new distinctions will cut across the old ones. Thus when we examine the forces determining labour utilisation in under-developed countries ('unemployment' and 'under-employment' are as misleading as 'education'), we shall discover that certain forms of education improve the quality of work and its efficiency, as well as, by improving hygiene and sanitation, the duration of work. Capital equipment may extend the duration (co-operation enforcing discipline) and efficiency. Instead of separating 'equipment' from 'labour' and aggregating each, we may arrive at a new abstraction in which skill and knowledge are infused through the introduction of machines.⁷

7. An interesting attempt to construct a model in which all productivity change is embodied in new investment was made by Professor Robert M. Solow, who,

The formulation of long-term plans of economic development for underdeveloped countries which must incorporate the planning of education, must meet, in addition to these conceptual, certain other requirements.

(i) A long-term plan must embrace a study of how and how far traditional educational patterns have contributed to the failure of social and economic progress in the past. The study must discover whether the attitudes which are hostile to economic progress have been the result of a specific structure of education, and what modifications of that structure are needed to accelerate development. In both the formerly British and the formerly French territories a disdain of technical education has grown up which has been strengthened by the low status of technical schools and the restricted openings for their pupils. So long as the Civil Service and the appointments controlled or influenced by it are the preserve of the non-technically educated, the best ability will be diverted into non-technical education. This will both justify and strengthen the initial disdain and render progress more difficult. On the basis of this study of obstacles a new educational structure can be planned which will raise the status of those who meet the requirements of accelerated growth. Thus both diversion of the best talent and an increase in the supply of the required skills will be achieved.

(ii) The second requirement is a concrete idea of the size and composition of long-term development, based upon knowledge of the concrete endowments of the economy and a clear formulation of specific objectives and ideals. From these the future pattern of manpower distribution can be derived and thus an indication of the measures and the timing needed for educational development. The long gestation period of much education and training requires that starts are made now in order to reap results after 15, 20 and 25 years. Neither general formulae of ill-defined and irrelevant aggregates and their unverifiable relationships, nor even the occupational composition experienced at comparable stages of development in advanced

in the words of Arthur Smithies, 'is like a Pied Piper who can play different tunes'. This particular tune is the exact opposite to those which separate 'disembodied' knowledge and other improvements from capital accumulation. ('Technical Progress, Capital Formation and Economic Growth', *Papers and Proceedings, American Economic Review*, May 1962, pp. 76-86), Professor Kenneth Arrow and Messrs. N. Kaldor and J. A. Mirrlees also have proposed a model of this type in *Review of Economic Studies*, June 1962.

industrial countries are of much use.⁸ Past experience of non-Soviet countries relates to spontaneous growth (or its failure). It cannot be assumed that deliberate efforts to accelerate growth by a series of policies would show the same requirements. The problem is to overcome specific difficulties, which differ from country to country and from time to time, while historical experience from now advanced countries points to broadly similar categories. From the long-term plan the quantities and types of educated personnel in detailed categories can be derived. Since changes in technology, demand, international policies, etc., will continually change these requirements, the long-term plan should be a 'rolling' plan, reviewed continually and at least annually, and adapted to new information. It should provide the framework for the 5-year (or seven-year) plans and for the annual budgets, so that policies which will not bear fruit until after more than five or seven years do not get neglected. To avoid superimposing new rigidities upon often already rigid economies, all three plans, the annual budget, the 'plan' and the perspective plan should be reviewed continually, and carried forward, so that they apply always to the next year, five years, fifteen years.

(iii) A number of measures will have to be taken which lie outside the scope of conventional economic considerations. Thus if training takes place abroad, the return of the trained men will have to be insured; if they have acquired the required skills, it will be necessary that they use them in isolated rural areas and reluctance to live there has to be overcome; the type of training provided must fit the available technology and not be appropriate to a more advanced form, etc.

(iv) Because of the narrow margins of tolerance and the closeness

8. The most promising approach is that adopted by Mr. Pitambar Pant of the Indian Planning Commission: 'To conclude, planning for education involves careful analysis of a number of issues . . . [the] planning of [of education] should be approached from the point of view of long-term objectives of the society. In other words, the objectives and programmes of education should be related to the requirements of the future plans. Secondly, it is not very meaningful to talk in terms of aggregates, when the equation of supply and demand has to be worked for each separate category of personnel. For only to a limited extent are these variously qualified graduates interchangeable. A comprehensive plan should identify clearly the various categories of trained manpower required, and it is the main function of the educational process to give to properly selected boys and girls the best education and suitable environment to fit them for creative endeavour in future.' *Indian Journal of Public Administration*, Vol. VII, No. 3, p. 330.

of many underdeveloped countries to misery and starvation, it is crucially important that minimum needs are estimated and that the required combination of measures are planned and executed. Failure to execute complementary measures can spell disaster. The isolation of 'educational' expenditure distracts attention from the urgent need, not only to select the right type of education, but also to combine it with the provisions of better seeds, drainage and fertilisers, with land reform and price stabilisation, with improvements in transport and birth control, with a reform of recruitment to the Civil Service and business management. The waste involved in not planning for the required complementarities, and pushing education too far, can be catastrophic.

(v) The detailed planning of education and training will have to make explicit political judgments about the distribution of the benefits between classes and over time. One of the costs of raising output later above what it would otherwise have been is the use of resources now to support the educational system required at a later stage. Since the social rate of time discount will tend to be high in countries where many are on the verge of starvation, extreme care is required in the expenditure on education. Financially conservative advice will be politically difficult and unpopular and may in many areas give rise to accusations of racial discrimination. Efforts are therefore needed to remove prejudices against quick-yielding and applied types of education. Education has to be used to get the right kind of education accepted. The larger the area for which collective planning can be initiated, the greater will be the scope for, and the less will be the danger of, indivisible highly specialised institutions which are expensive, not directly related to current progress, but imposing and prestige-yielding. The division of labour, in this field too, is limited by the extent of the market, and the larger and richer the area the more scope is there for specialised units conducting 'basic' research. Although it is true that the practical use of 'pure' research is unpredictable and that conscious direction of education and research to 'applied' field does not always yield higher returns earlier than some initially 'pure' research, it cannot be denied that it takes time between a discovery, its application by engineers and its exploitation by entrepreneurs and their followers. Only a large and rich economy with a low rate of time discount can afford to devote much energy to basic or pure scholarship. It must not be forgotten, moreover, that

the adaptation of known techniques by poor developing countries could raise substantially their real income. Training rather than research would yield maximum returns.

The choice of the distribution over time is related to the choice between types of education with a high ratio of instrumental to independent value and those with a low ratio. The pursuit of knowledge for its own sake, wherever it may lead, is highly valued in many cultures, but it is not costless. This decision will in turn depend upon the political judgments made about the rate of growth of real income compared with that of leisure and the form in which leisure is to be enjoyed. These political value judgments will not be given once for all, but will themselves change as the plan is executed. But without a specification of concrete valuations and concrete manpower requirements, the calculation of 'returns to education' suppresses these value judgments in a pseudo-scientific formulation, buries the factual judgments in misplaced aggregation and severs crucial connexions by illegitimate isolation.

5-3. Strategies for investing in people

"In its educational investment a country must adopt a balanced program, suited to its own needs and stage of development, or it may run into trouble."

FREDERICK HARBISON

The work of Schultz on the economic value of education and the cautions of T. Balogh and P. P. Streeten about the use of this approach in developing lands make appropriate a consideration of proper strategies for using education as an investment in people. We have said repeatedly that education becomes a relevant factor in economic growth only when it is properly integrated with all the other factors in development. Moreover, it must be education of the right kind, in the proper balance, and suited to the stage of development.

If these conditions for investment in education are to be approached, careful strategies must be worked out. If viable strategies do not guide the investment in education, people will be trained for vocations they cannot enter and with knowledge they cannot apply. In the following selection Fredrick Harbison discusses strategy questions for four countries, all in different stages of development: Nyasaland, Colombia, China, and Egypt. His treatment of investment problems for each country makes apparent the necessity for considering with as much precision as possible the unique requirements of a particular country and its particular development problems.

[Frederick Harbison]

The progress of a nation depends first and foremost on the progress of its people. Unless it develops their spirit and human potentialities it cannot develop much else—materially, economically, politically or culturally. The basic problem of most of the underdeveloped countries is not a poverty of natural resources but the underdevelopment of their human resources. Hence their first task must be to build up their human capital. To put it in more human terms, that means improving the education, skills and hopefulness, and thus the mental and physical health, of their men, women and children.

The way to start seems obvious and quite uncomplicated: build schools and launch a massive program of primary and secondary education and technical training. But the problem is not really that simple. These countries are not in a position to adopt any such crash program. Their limited funds for investment in education must be placed where they will do the most good. Moreover, the shotgun approach may create more difficulties than it solves; in some countries the training of more engineers, for example, may produce nothing but trouble. In any country, developed or undeveloped, education can become socially malignant if its people do not have a chance and incentives to use it.

Each country therefore needs to think out a strategy for the educa-

Frederick Harbison, "Education for Development," *Scientific American*, vol. 24, no. 3 (1963), pp. 140-147. Reprinted with permission. Copyright © 1963 by Scientific American, Inc. All rights reserved.

tion and development of its human resources. The strategy should be based on the character and traditions of its people, the stage of the country's development and the opportunities available for its advancement. This conclusion has been strongly impressed on me by a comprehensive study of 75 countries I have made in collaboration with Charles A. Myers of the Massachusetts Institute of Technology, which will shortly be published as a book under the title *Education, Manpower and Economic Growth*.

I will present in this article some of the main ideas that have come out of the study, illustrating them with brief descriptions of the situations in four countries that represent different stages of development, with problems typical of each stage. The four countries are Nyasaland, Colombia, China and Egypt.

Nyasaland is a small country in east central Africa that is fairly representative of a number of the newly emerging African states (Tanganyika, Kenya, Nigeria, Mali, Gabon, Northern Rhodesia). It ranks as one of the least developed countries. It has been exploited for three cash crops—tea, tobacco and cotton—grown on large plantations that until now were owned and managed mainly by white settlers. Most of the country's three million people are small farmers scratching out a meager living; the estimated per capita income is only about \$60 a year. Modern industrialization is far beyond the present reach of the country and therefore its economic growth must depend largely on the development of its agriculture.

Nyasaland now has its own government and legislature, but it still must depend on foreigners to fill about 90 per cent of the high-level jobs in government and private occupations that require people with at least a secondary school education. In the entire country there are only a handful of native doctors, one lawyer, one engineer and not a single native stenographer. The country has no scientists of its own. No more than about 400 Nyasas have completed secondary school and only about 50 have had any university education—all, of course, outside the country.

Although about 40 per cent of the children of elementary school age attend school, the dropout rate is very high: of 33,000 who started school in 1951, only 620 went as far as 10 years of schooling. Most of the country's elementary school teachers are unqualified, having had no more than a primary education themselves, and in the secondary schools only about a third of the qualified teachers are African.

Naturally the Nyasaland government has an acute desire to make

the country truly independent by training Africans for the high-level jobs in government, business and education that now have to be turned over to non-Africans. Since this will be at best a slow process, it appears to be the better part of discretion for the government to keep the foreigners as long as possible and enlist their co-operation in training their eventual replacements. And in the replacement program the government's best prospect is to upgrade and train Africans on the job—within the government, business establishments, plantations, schools and other institutions in which it needs skilled people.

The Nyasas who take over these jobs naturally want to be paid the same salaries as the foreigners they replace. This is difficult for the government, because it faces extraordinarily high expenses for the educational and other new services it must organize. Yet it must establish a rational system of incentives for its own people, making compensation commensurate with the importance of the job rather than with family status, political connections or other considerations that have dictated payment in the past. Without a proper system of incentives for ability and performance the investment in education will be wasted from the standpoint of contributing to the country's progress.

In building its educational system for the next two decades Nyasaland faces some hard choices. How much should it invest in elementary education and how much in secondary? If it is to make headway as a nation, it needs a literate people and a stronger wellspring of schooled youngsters coming up to build its future. On the other hand, it must have as soon as possible a core of educated Nyasas who can serve as the leaders of its economic and political development when the foreigners leave. Necessarily, then, for the next 10 years it should give the highest priority to secondary school education, which today enrolls only 1.5 per cent of Nyasaland's children of high school age.

Should it concentrate on general education in the secondary schools or on vocational and technical training? Again the decision is difficult but unavoidable: general education is clearly indicated. Vocational training is four to five times more expensive per student; there are no schoolteachers competent to give it; it is difficult to forecast exactly what vocational skills the new nation will need most, and such training can be given more efficiently on the job.

In the case of higher education the choice is also tricky but, for good and understandable reasons, it is less difficult. For some time

to come it would be cheaper for Nyasaland to send students to universities abroad and pay their tuition than to build a university. As a matter of national prestige, however, and to retain its ablest youths instead of running the danger of losing them permanently, it is important to Nyasaland to have its own university. Consequently the present government has committed itself to building an institution of higher education. It will be able to focus on the kinds of higher learning the nation needs most and to stand as a symbol and leader of its culture.

Although elementary schooling must take a back seat in financing for the next decade, it need not languish. The main emphasis there should be on improving the quality of teaching and seeing that those pupils who do enter school go through to the end of the primary grades. A beginning can also be made in introducing modern tools of education, such as appropriate local textbooks and study materials, visual aids, radio, television and other devices. And once the immediate necessities of secondary and higher education are taken care of Nyasaland should move on to provide elementary schooling for all its children.

Last but not least, Nyasaland and all other countries in its situation have a great need and opportunity for adult education. Formal classes in basic education for the country's men and women could go a long way toward making up for the deficiencies of their early schooling and raising the national literacy. In addition to this the adult education program should offer extension courses in agriculture, health, child care, home building and other subjects that will be an immediate contribution to the improvement of the lives of the people.

Colombia, usually classed as an underdeveloped country, is fairly well advanced compared with Nyasaland. On our scale of measurement of human resources it stands about midway between primitive Nyasaland and the developed countries of western Europe. We classify it as a "partly developed" country, along with some other countries in Latin America and nations such as Turkey, Iran, Pakistan and Ghana.

Colombia has 13.6 per cent of its high-school-age youngsters enrolled in secondary schools, compared with 1.5 per cent in Nyasaland; it has 25 universities, with 1.8 per cent of its college-age population enrolled; its gross national product per capita is about \$260, against Nyasaland's \$60. Colombia is still primarily agricultural, with 54 per cent of its people engaged in farming, but it has rapidly growing

industries and its economic growth in the near future will depend mainly on further industrialization.

For top-level jobs Colombia has all the educated manpower it needs, except in engineering and science. But it is very short of skilled people at the technical and subprofessional levels: technicians, foremen, assistants in agricultural research and guidance, teachers, nurses and so on.

Colombia's system of higher education is unbalanced, offering as it does many courses of study in the humanities and law but few in science and engineering. Moreover, the quality of its universities is low: they are poorly equipped with libraries and laboratories and rely almost entirely on ill-trained, part-time teachers. The emphasis on the humanities and law at the expense of the sciences is an expression of the sacrifice of quality for quantity; it costs only about a sixth to a fourth as much to give the students law courses as it does to teach them engineering or science. Thus Colombia finds (as countries starting their own universities also do) that it can accommodate the largest number of students per dollar by skimping on science and technology.

Even more inadequate is the training of technicians and subprofessional workers. Compared with 23,000 students in the universities, Colombia in 1962 had only 1,150 in technical institutes; it is turning out more engineers than technicians, although the proportion should be the other way around. In the developing countries even more markedly than in advanced ones, young people prefer college to a technical school by a wide margin because it means higher prestige and better pay when they graduate.

Oddly enough, although Colombia supports 25 universities and offers a university education at a very low tuition, it shows much less interest in secondary education. There are few public secondary schools; most Colombians who want to go to college must prepare at a private school. Enrollments in the private preparatory schools are limited, and less than 5 per cent of Colombian families can afford their fees. Thus secondary education in Colombia is a bottleneck allowing only the children of the rich to go on to universities, instead of being a door leading to opportunity for the development of the country's able youth.

Colombia's primary schooling also is underdeveloped. Considerable money has been spent in building schools, but the curriculum is poorly planned, the teaching substandard and the dropout rate high.

By the third grade a majority of the pupils have quit, and only about an eighth of the children who enter the first grade go all the way through the five years of elementary school.

The strongest element in Colombia's educational establishment is a system of training factory workers that is financed by a tax on employers and controlled by their organizations. Outstanding is the work of the National Service of Apprenticeship (SENA). It has built and equipped modern vocational training centers, employs expert instructors and not only trains apprentices but also gives in-service instruction of many kinds to workers in the factories.

In Colombia as in Nyasaland the greatest immediate need, from the standpoint of developing the country's human resources, is to expand and reform the secondary school system. Along with providing free secondary education for all those who are qualified to take advantage of it, Colombia should develop the agricultural, scientific and engineering faculties of its universities. It should improve the quality of the student body and of the teaching in the universities rather than merely enroll as many students as possible. This shift in emphasis would be politically unpopular, but a proper system of incentives could make it palatable. The government will need to take the lead in improving the relative pay and status of scientists, engineers and workers in other professions where there are critical shortages. The same strategy should be applied to the recruitment of people into the technical and subprofessional occupations. These jobs probably could be made sufficiently inviting if the pay were comparable to that received by general college graduates and if the subprofessionals were given opportunities for promotion to professional posts by taking spare-time university courses.

China, our third illustration, also is a partly developed country. Its educational enrollment ratios are much like Colombia's: it enrolls about 40 per cent of the population in elementary schools, 14 per cent in secondary schools and 1 per cent in higher education. But there the resemblance ends. The mere statistics in this case give little indication of the size and intensity of China's educational effort and progress.

The Communist government of mainland China has organized an all-out program to train and mobilize manpower. In the nine years between 1950 and 1959 China increased its enrollment in elementary schools threefold, in secondary schools ninefold and in higher education sixfold. Today the country has 100 million students in school—

more than the combined totals of the U.S. and the U.S.S.R. It is turning out three-fourths as many engineers as the U.S. and ranks third in the world in this respect, after the U.S.S.R. and the U.S. in that order. Perhaps the most remarkable statistic, giving the measure of China's effort, is that, of the country's present 250,000 scientists and engineers, 90 per cent have been trained since the Communist government came to power in 1949.

Once a land of philosophers, artists and peasants, China is being transformed into a nation of technocrats. Its Confucian sages have been replaced by scientists, engineers and industrial managers. Its educational program is geared mainly to industrialization. In its universities the humanities have been downgraded, and more than 55 per cent of the students are enrolled in science and technology, compared with 25 per cent in most other countries. China seeks to gain standing as a world power through rapid industrialization, and as its first objective it aims to reach Britain's level in industrial production by 1967.

China has a long way to go economically. Its gross national product per capita is probably no more than \$75. The strategy of its officials and planners in education seems to be to try to do everything at once—to attack all the expedient approaches and above all to emphasize action. As recently described by a Chinese Communist newspaper, the educational program includes schools operated not only by the state but also by all kinds of agencies including factories, mines and "street organizations." The Chinese people are studying full time and part time, in school and at home, in tuition courses and free ones. The quality of most of their education, including much of that in the universities, is questionable, and so is the strategy of an onward rush by any and every possible means. It may result in crippling steps backward as well as leaps ahead.

Egypt, our fourth example, is an odd case: except in certain specialties, it has a larger number of highly skilled people than it can use. The reason I have chosen to discuss its situation is that Egypt represents certain countries (among them India) that seem to be spending more effort in producing high-level skills than is justified by their present stage of development.

By most criteria Egypt is an underdeveloped country—limited in resources, mainly a nation of farmers (65 per cent), low in gross national product per capita (\$140) and only semiliterate in terms of the proportion of its children who go to elementary school. But tak-

ing secondary and higher education into account, Egypt is a semi-advanced country.

In proportion to its population Egypt has more students in universities than Britain and twice as many in secondary and higher education as West Germany. Egypt has an alarmingly high rate of unemployment among university graduates, and the government is hard pressed to find jobs for them as junior clerks and minor functionaries in the already overstaffed ministries. Thousands of Egyptian schoolteachers, engineers and agronomists have left home to teach and work in neighboring Arab countries.

The government of Gamal Abdel Nasser is attempting to relieve the pressure of high-level unemployment and correct Egypt's unbalanced educational system in several ways. It is encouraging its unemployed graduates to work in less developed countries and is inviting those countries to send students to its universities. It plans to expand and improve the education of skilled technicians and administrative personnel, of whom it has a shortage. It could and should proceed rapidly to provide elementary schooling for all its children, for which it can easily train all the teachers it needs. Common sense also suggests that Egypt should cut back its university enrollments and raise the standards of secondary and higher education. The clamor of parents and their children for more education, however, makes this politically impossible. Consequently it appears that Egypt's best hope is to go in for kinds of economic development that give maximum opportunities for the employment of highly educated people.

These four countries—Nyasaland, Colombia, China and Egypt—are merely samples of the 75 that Myers and I have studied, from the world's most underdeveloped nations to the most advanced. I should like to sum up a few of the generalizations that emerged from the study.

First, there is a strong correlation between a country's educational development and its economic productivity. Using an indicator of educational development that is based on the enrollment in secondary schools and universities, we found that in the 75 countries the coefficient of correlation between educational level and the gross national product per capita is .888. The best single indicator of a country's wealth in human resources is the proportion of its young people enrolled in secondary schools.

Second, education alone is not enough to assure a nation's prosperity. For example, in its level of education Japan certainly ranks

among the world's top 10 countries, but its gross national product per capita is only about \$300—far below the advanced countries' \$1,100 average. Egypt, India and Thailand also rank high in education and relatively low in gross national product per capita, whereas in countries such as Saudi Arabia, Liberia and Venezuela the situation is reversed. Obviously many factors other than education enter into a country's economic progress, including its natural resources, foreign markets, outside assistance and so on. Therefore we cannot say that an investment of x dollars in education will produce a y result in economic growth. All we can predict is that a well-educated and motivated people will do extraordinarily well, as the little country of Israel, with its very limited natural resources, is demonstrating today.

Third, in its educational investment a country must adopt a balanced program, suited to its own needs and stage of development, or it may run into trouble. It will have a number of choices to make, and for its educational program it will have to find the best compromise among: (1) quality and quantity, (2) science and the humanities, (3) vocational training in school and on the job, (4) regulation of salary incentives by the state and by the market and (5) the needs of the individual and the needs of the state.

Fourth, a country's educational investment and goals must be shaped realistically to the level of its economic development. Whereas in a nation such as the U.S. a high school education barely qualifies a person for a semiskilled job, in an underdeveloped or partly developed country it may suffice for the highest positions until the country is able to advance to a higher level.

Fifth, education generates a strong demand and push for more education. This has been true in all the advancing countries. The development of elementary schools creates a demand for secondary education and this in turn for higher education of many kinds. Unlike the demand for material goods, which may become saturated, the demand for education is never really satisfied, not only because it offers the individual an endless frontier of advancement in career and status but also because it opens irresistible frontiers for the human mind and curiosity.

Detailed quantitative research on education as a factor in national development is itself in need of development. Many of the variables can be identified as precisely as variables in economics, and it should be possible to work out rational strategies in educational policy as in other economic affairs.

Unfortunately it seems most unlikely that science will ever find a formula for the abolition of inertia and political immorality. But education contains seeds that, as history has repeatedly shown, can inspire and energize a whole people.

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chapter 6

Contributions of Vocational Education to Economic Growth

6-1. A proposal to relate education directly to production

"A change can only come by linking educational advance closely with rural change and with the modernization of agricultural production."

THOMAS BALOGH

No single issue in the strategy for using education for economic advance is more provocative than the one debated in this selection and the next. It concerns the posture of education in relation to the immediate production needs of the society. No one examining a developing country could fail to be impressed by those needs in the agricultural and industrial sectors of the economy. Agricultural practices must be improved, food production increased, rural credit extended, and marketing practices made more efficient. On the industrial side, the needs are equally apparent for widened entrepreneurship, better production and distribution methods, and more research. How are these needs to be met? In respect to education two basic approaches are available. On the one hand, the schools may be used as the training agents for the production process, gearing their curricula and teaching to produce skilled people who can step directly into jobs, having been fully and ex-

pertly prepared by the schools. On the other hand, the schools may be used as indirect, rather than direct, producers of human resources to meet the production needs of the economy, placing more emphasis on the basic skills of literacy, language, and the physical and social sciences, and shifting more of the burden of specific skill training—both off and on-the-job training—to business and industry.

In the following selection, Balogh argues for the former alternative of using the schools for training directly for the production process. In the debate that follows in the next two selections, one should not lose sight of the central agreement running through them, namely that vocational education is indeed a vital component of education's contribution to economic growth. The urgent problem is to learn how to maximize its impact.

[Thomas Balogh]

In considering a balanced educational programme for most independent countries of Africa, it is necessary to recall the ineluctable fact that an overwhelming proportion, much greater even than in most other less developed areas of the world, of the population, between 80 and 90%, depends directly on agriculture as an occupation. In considering educational plans, therefore, it is essential that the strengthening of the agricultural production framework should receive adequate attention.

Agricultural backwardness is the gravest cause of poverty, hunger, misery, and even illness. No balanced increase in the standard of life in Africa over a very long period, certainly within the next two generations, is possible without agricultural advance. Indeed, an increase in the standard of life can only be brought about through agricultural progress. The importance of this fact cannot be stressed enough. Even if economic development plans prove extraordinarily successful (and—because of their influence on mortality—partly because of such success), the absolute numbers in agriculture will steadily rise even if the proportion in agriculture begins to fall. There

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is no need to elaborate hard and fast statistical rules in this respect. It stands to reason that when nonagricultural employment is a small fraction of the agricultural, even its rapid advance cannot absorb all, or indeed nearly all, of the absolute increase in the total population.

There seems little doubt on the basis of the reports of innumerable committees and experts that agricultural advance and, in its turn, advance in nutritional habits are not possible without infusing into the new generation and as much of the old ones as seems feasible, a new attitude to its problems. *An essential basic requirement of educational reform is therefore its reorientation towards agricultural progress.* This has been conspicuously absent in African educational movements and it must be said that the achievement of independence has not on the whole meant a break with past attitudes.

It is not difficult to explain the origins of the grave, indeed the gravest problem, which African states now face. It reaches back into the past history of the new independent countries. The attitude to education of their population, the broad masses and the elite alike, is determined by their previous experience which has little, if any, relevance to the problem of the future. The educational system is necessarily an adjunct of the society and the state organization in which it arises. Until recently, the framework and functioning of African government, both on the local and higher level, were determined by the principle of maintaining law and order and of providing the negative framework for the economic activity of private firms and individuals in the modern, and, for an unchanging subsistence agriculture, in the traditional sector.

The machinery of the state and of education was thus geared to assure the minimum requirements for this purpose and no more. In the French territories, the aim was to assure educational equality at each stage with the corresponding institutions of the Metropolis. The schools in the periphery were exact replicas of analogous institutions at the centre, and it can be asserted with some force that their particular aims, very elevated perhaps but certainly wholly irrelevant for the future success and prosperity of Africa, were successfully achieved. In the British territory, too, the educational system was modelled after the British system at its stage of development before education was made free, compulsory, and universal. Voluntary mission schools were complemented by private secondary schools on the so-called public school models. Some pre-college education was provided and subsequently expanded; and, after the war, university

colleges, closely modelled on Oxford and Cambridge, completed the picture.

The accent on quality, of which this system of education was an expression, is not to be dismissed out of hand. It should be noted, however, that the cost of the educational process limited the scope of education to a very small number so that the impact of the system on the overall educational level of the community as a whole was, if not negligible, completely insufficient. Even in countries where primary education had developed further, the educational system was completely unbalanced and incapable, because of lack of secondary follow-up, of furnishing professional, or even clerical, and trained manpower in sufficient quantities. Perhaps the best comment on the impact of this type of education on the attitude of Africans has been, if unwittingly, provided by an administrator of the old type who asserted: "The African is slow to learn the value of free service. This is one of those psychological factors which are so important in Africa and which give rise to so much ignorant criticism elsewhere." With an average income of \$80 p.a., there were few in tropical Africa who could pay for education.

From the viewpoint of the emergent African states, this system unnecessarily constituted a hindrance rather than a help to social and economic progress. The scarcity of educational facilities, and the consequent restriction of entry to the children of the influential and less poor, gave it an aristocratic slant not unlike that in Britain of the pre-Victorian Reform era. Consequently, education, far from providing the economy with better and more trained manpower at every stage and level, was increasingly considered incompatible with menial jobs, i.e., any kind of job involving manual labor and more especially agricultural labor. Even the most rudimentary relationship with education threatens to alienate its beneficiary both from the milieu in which he has been brought up and the improvement which ought really to be the essential aim of the educational process.

This extremely anti-social and anti-progressive impact of education has been much accentuated, paradoxically enough, by the quest for equality by Africans interpreted in a peculiar and, it must be said, destructive sense. The representatives of the colonial powers, for reasons which are historically comprehensible, had been educated in this "general" fashion. And, in the historical context, this was right. What was required by the Colonial Governments and the large metropolitan corporations was ability to manage affairs, ability to

perform the work both of administration of States which did not undertake positive tasks, and of administration of great corporations which hired technical experts when required. Thus the population of the African States which they governed became conscious of the great advantage in terms of personal careers of a general type of arts education. The fact that they came from well-connected families enhanced this impression. The strong differentiations of the African social structure predisposed the acceptance and perpetuation of such attitudes. The status and prestige of this non-technical education rose with the examples of success which it achieved in all the territories of Africa. The Sorbonne and the arts faculties of the ancient universities of England contributed equally, each in its way, to the crystallization of this attitude. In practically all countries, this attitude also involved a disparagement and depreciation of the importance and status of technical knowledge. Vocational training was as much looked down upon as its products were disadvantaged. In the hierarchical structure of Africa, the technical and educational services were placed well below the (well-connected) general administrator.

This stratification, inimical to social and economic progress, has not changed with independence. The formidable social obstacles and vested interests in the way of such a change have received reinforcement by the process in which the so-called Africanization of the government services was carried out, in a way which accepted as valid the equality of status with that of the foreign administrators. Not only was the differentiation between administrators and technical experts perpetuated, but, as we have already seen, that between the government services and the mass of the people.

The spread of education built on this basis is wrong for Africa because its essential characteristic is that of elite education of a type which presupposes the existence of large uneducated masses doing menial jobs. In addition, the salaries and the cost of building schools and teachers' homes (a secondary teacher's house is to cost \$10,000 in an environment where 90% live in mud huts or worse), if undertaken on the basis of past standards, would itself absorb productive capacity which ought to be used to open up roads, build bridges, construct dams and irrigation channels, and establish the basis of modern agriculture. . . .

What would then be the ingredients of a balanced educational

programme? In the first place, such a programme must give the highest priority to general education and training for rural advance. The provision of technical knowledge, both in the rural area and for the urban industrialization programme, must be oriented from this basic viewpoint.

In the second place, the cost of such a widespread and effective education and training programme must not be so crushing as to prevent its harmonious integration into a general development programme. The distance and dispersion of the population will demand a disproportionately heavy substructure investment which will contribute little to national income. If, then, a balanced advance is to be accomplished, extreme conservatism will be needed in limiting expenditure.

In the third place, the programme should be so conceived that both the creation of a new administrative, technical, and teaching cadre and the general education system should concentrate on producing the framework in which cooperative, communal work can flourish so as to increase productivity. This demands a basic reorientation of educational policy because until recently, training and education were undertaken on a selective basis not always favoring the most efficient solution for a mass advance in welfare. There has been, in particular, integration of general agricultural extension work and education with political administration and with the institutional organization needed to increase the effectiveness of work. The consequence is that a number of very ambitious schemes have been started which, though extremely costly, have little, if any, impact on the life of the population as a whole. This is not merely so in the case of the existing organs for higher education, but also in rural settlement schemes, the cost of which is so heavy as to exclude any generalization. They are thus irrelevant for the solution of this socio-economic problem of the countries of Africa.

A change can only come by linking educational advance closely with rural change and with the modernization of agricultural production, including marketing and credit. In addition, the administrative hierarchy has to be made to fit into the reorganization so as to promote and assist rather than to deter modernization and the acquisition of technical knowledge and its application.

Elementary education must strive to impart directly available technical knowledge to the rural youth, enabling them to increase

production. The possibilities in this respect are immense. Better seed, the treatment of seed, the use of better implements and techniques, of fertilizers, the right choice of the planting period, these could easily double output in vast areas in five years. Education must also embrace alimentation, one of the most awkward problems of Africa. Improved feeding must be demonstrated, not discussed in the abstract. No better use could be found for food surpluses than such a campaign. It could palpably demonstrate the superiority of the new ways of life and give incentive to changes in production.

Above all, elementary education must cease to alienate pupils from their environment and render them unfit for the purpose to which education ought to be dedicated, namely, the rise in rural welfare. The reorganization of elementary education ought to be so conceived as to create prestige and status for agricultural work. It must therefore go hand in hand with a change in the rural framework and rural life towards increased productivity. At the same time, its expansion must not absorb too large a proportion of available scarce resources relative to the other needs of the country. All these requirements could be met by using the only economic reserves of the African countries, the large-scale under-employment of their population.

The rural elementary school must be made the centre of rural renaissance. This means that in its curriculum, rural science, such as elementary biology, elementary soil chemistry, and elementary technical knowledge and use of implements, and of crop management must be given an increasingly important place. Teaching must be followed up by doing. It is not only essential that schools should have land attached on which the children can be trained in more effective methods of production without being for one minute divorced from their original milieu, but, in view of the overall economic problems facing most African countries, that the school should become more or less self-supporting and thus diminish the draft on the general resources of the country.

At present, elementary education follows closely on the European pattern. It starts at the age of 6 or 7 and, theoretically, gives four to five years' education. There is no reason whatever why this pattern, which was evolved in Europe in the early nineteenth century because children of 11 or 12 were then not exempt from factory employment, should be perpetuated. Education should begin when the adolescent is at his most absorptive from the viewpoint of learning and can

also contribute positively to the work of the model school farms. At the same time, special facilities should be provided for talented children to continue their education through scholarships.

The school building and the teacher's residence should be constructed by the villagers with some help, in terms of modern building material, given by the Central Government. It should be emphasized, however, that these buildings must be in keeping with the new *national* character of the teaching service in contrast to the Metropolitan standards of the preindependence educational system. And if the salary of the teacher is to be in tolerable relation to the average national income and, nevertheless, a very large number of able and ambitious young people, capable of giving effective, indeed revolutionary, leadership to the rural communities, is to be recruited, other, non-material incentives must be provided.

6-2. A rebuttal

"No amount of technical, vocational, or agricultural instruction taken alone within the formal educational system is going to check the movement from the rural areas, reduce the volume of unemployment or indeed necessarily have any effect, in itself, on the rate of economic development."

PHILIP J. FOSTER

The case for Thomas Balogh's view of vocational education's role in economic development rests upon several assumptions, as Philip J. Foster points out in the selection that follows. One of those assumptions is that the school, even with the limiting conditions of its existence, can accomplish almost anything as an agent of social change. Balogh's conception of what the school can accomplish is almost without limit. He views the school as an extremely flexible institution that can alter its functions with relative ease and adapt its operations

to problems not included in its historic tasks. There is also in Balogh's view an assumption of independent power on the part of the school that enables it to invoke social change by direct intervention. A different set of assumptions underlies the following selection by Foster. Foster is skeptical about the power of the school to intervene directly in the social process and regards it as a bit unfair that society should ask the school to untangle knotty problems that were created outside the school. If answers are to be found, he believes, they must be found outside the school. He believes the school's signal contribution to economic development is to be made through what it is best prepared by its unique tradition to do, and even under the best of circumstances is doing none too well, namely to teach the basic skills, language, mathematics, science, and to transmit the cultural and national values.

[Philip J. Foster]

It would seem that our major disagreement with Balogh lies [first] in the kinds of "strategy" that he proposes and the degree to which he places reliance upon *formal* educational institutions in instituting change. Secondly, there is a tendency on Balogh's part to view vocational and general education as substitutes for each other rather than see them as essentially complementary and hardly substitutable.

There is, perhaps, a general tendency to accord to the schools a "central" position in strategies designed to facilitate economic development. To some extent this reflects an appreciation of the relative lack of alternative institutions which can be utilised, but it stems partially from the notion that schools are particularly manipulable institutions and can readily be modified to meet new economic needs and, more particularly, to accord with the intentions of social and economic planners. It is hoped to indicate here, on the contrary, that

Philip J. Foster, "The Vocational School Fallacy in Development Planning," Conference on Education and Economic Development, University of Chicago, April 4-6, 1963, pp. 3-5, 9-11, 14-17, 22-23. (Mimeographed.) Reprinted from C. Arnold Anderson and Mary Jean Bowman, eds., *Education and Economic Development* (Chicago: Aldine Publishing Company, 1965); copyright © 1965 by Aldine Publishing Company.

schools are remarkably clumsy instruments for inducing prompt large scale changes in underdeveloped areas. To be sure, formal education has had immense impact in Africa but its consequences have rarely been those anticipated and the schools have not often functioned in the kind of manner intended by educational planners.

If there is anything surprising in Balogh's views it does not lie in their originality but in the degree to which they reproduce with virtually no modification a series of arguments that were first stated in equally cogent fashion by the Education Committee of the Privy Council in 1847. So far as Ghana, in particular, is concerned the viewpoint was forcefully advanced in the Appendix to the Report of the Commission on the West Coast of Africa in 1842 and by a succession of colonial governors and educators thereafter. In fact, it is possible to demonstrate that stress on the provision of vocational and agricultural education was included *without exception* in every major document related to educational development in the Gold Coast up till the grant of independence in 1957.

In spite of this, by 1959 the structure of the Ghanaian educational system was essentially that prevailing in most of British Africa—an expanding base of primary and middle school education of a predominantly academic variety capped by a group of highly selective grammar schools and a University College modelled closely upon British prototypes. In that year only about one per cent of all persons enrolled in formal educational institutions were undergoing instruction in vocational, technical, and agricultural subjects. The apparent paradox in Ghanaian education has been the emphasis placed upon vocational and agricultural training in all documentary sources and the relative absence of it within the actual system of education. . . .

In practice, African demand for Western education was and is predominantly oriented towards the provision of academic type schools. This preference springs, in fact, from a remarkably realistic appraisal of the structure of occupational opportunities generated within the exchange sector of the economy as a result of European overrule. So far as the clientele of the schools was concerned the primary function of formal education was to enable individuals to move from subsistence activities to occupational roles within the European-dominated employment sector. An examination of occupational opportunities within that sector throughout the colonial period indicates that *relatively* there was a greater demand for clerical and commercial employees than there was for technically trained individuals. Op-

portunities certainly existed in technical fields and agriculture but they were inferior to the other alternatives. Access to most highly paid occupations was, therefore, achieved through academic type institutions. Those who criticise the "irrational" nature of African demand for "academic" as opposed to "vocational" education fail to recognise that the strength of academic education lies precisely in the fact that it is pre-eminently a vocational education which provides access to the most prestigious and, most important, the highest paid occupations within the Ghanaian economy. The financial rewards and the extent of employment opportunities for technically trained individuals were never commensurate with opportunities in the clerical field, and the product of the academic school was manifestly more advantageously placed. In this sense, therefore, the pressure for academic education reflected fairly accurately the pattern of demand for alternative types of skill within the exchange sector of the economy. One of the major ironies of the situation is that at the same time that proponents of technical education were criticizing the neglect of technical provision in the schools the products of such technical institutions as there were often experienced difficulties in obtaining employment and frequently did not enter occupations related to the training they had undergone. . . .

There is no doubt that the volume of unemployment among school-leavers in West Africa has reached alarming proportions. Research by Callaway in Nigeria and by the present writer in Ghana confirm its extent and incidence and give no reason to suppose that it is likely to diminish in the near future. However, the crucial question is not the amount of such unemployment but the delineation of significant factors determining its incidence. It has been frequently asserted that the source of the problem is in the reluctance of literate products of the schools to accept manual occupations, and their persistence in an unrealistic search for white collar employment that they believe to be commensurate with their status as "educated men." In this interpretation unemployment is conceived to be "frictional" in nature, and the schools are perceived to be the villains of the piece; it is inferred that the type of educational process to which students are exposed (i.e., the curriculum of the schools) largely determines their vocational aspirations and operates as an independent variable in setting the level of vocational choice. This has been a favorite theme for well-nigh a century. Balogh, for example, specifically attributes the present employment crisis in Nigeria to the provision of a particular

form of academic elementary education that has generated unrealistic employment expectations for clerical work, caused a flight from the rural areas, and induced in students a disdain for manual occupations. If this diagnosis of the problem is correct then the solution is simple; change the curricula of the schools to provide instruction based upon agriculture and technical subjects and the aspirations of young people will, in consequence, be directed towards agricultural activities; the flight from the land will be checked and the volume of "frictional" unemployment will correspondingly diminish.

This type of reasoning is largely fallacious. It has already been noted by others that the idea that vocational aspirations of children can be altered by massive changes in curriculum is no more than a piece of "folklore" with little empirical justification. In practice, in Nigeria and Ghana the products of the primary and middle schools do work with their hands and often seek employment as general laborers. Conversely, it is possible to indicate that even where students have been educated in agricultural or technical schools a high proportion of them have never entered the types of occupation for which they had been trained but have gravitated to alternative types of employment offering greater opportunities. These observations would tend to throw some doubt upon programs whose efficacy depends on the notion that the schools exercise a decisive influence upon vocational aspirations of students. However, more definite empirical evidence is available to suggest that in Ghana, at least, the disdain for manual labor believed to be so typical of the products of formal education has little justification in empirical fact.

In December 1959 the author drew a sample of 210 boys from the fourth forms of nine academic-type middle schools in Accra. These students were in their final month of studies preparatory to seeking employment or, in a few cases, continuing their education in other types of schools. Students were asked initially what kinds of employment they would most like to obtain if they were *completely free* to choose. This enabled children to fantasy as much as they wished regarding the type of occupation that they favored. Secondly, they were further asked what type of employment they actually expected to be able to obtain. . . .

It is evident that these findings in no sense indicate a predisposition to favor professional and "white collar" employment. Even where children were free to respond as they wished, no less than sixty-one and one half per cent favored artisan employment or farming (even

in an urban center such as Accra). Correspondingly a total of only thirty per cent favored employment in varying levels of "white collar" activity. The most instructive section of the study however, concerns job expectations. What is evident here is a remarkable level of realism. Although fifty-one per cent of students expressed the hope of ultimately entering employment as skilled artisans only twenty-two and four tenths per cent expected to be able to do so while thirty-five and two tenths per cent were fully reconciled to entering low level semiskilled or unskilled occupations. These observations, which tend to confirm an earlier study by Barnard, would seem to indicate that there is little foundation to theories based on the relationship between curriculum and vocational aspirations.

It seems clear that the cause of mass unemployment among school-leavers in many new African nations is due to dysfunctions existing between the gross rate of schools output and the slow rate of expansion of occupational opportunities of *all types* within the exchange sector. It may be easy enough to increase the output of the schools but it is far more difficult to expand employment opportunities. The operative fact here is not that the products of the schools will not accept certain types of employment but rather that the schools (irrespective of what they teach) have been inevitably used as the gateway into the "emergent" sector of the economy. The schools themselves can do nothing about this. So long as individuals (parents and students alike) perceive the function of education in this manner then agricultural education and vocational instruction *in the schools* is not likely to have a determinative influence on the occupational aspirations and destinations of students. The former is determined largely by the individual's *perception* of opportunities within the exchange sector of the economy, the latter by the actual structure of opportunities in that sector. The existing nature of educational instruction has, of course, little to do with the process and the schools are criticised for creating a condition for which they have not been responsible except insofar as they turn out *too many* graduates. . . .

So far, we have argued that the vocational aspirations of children and the occupations which they enter are almost exclusively determined by factors which lie outside the schools. Indeed, in terms of the actual opportunities open to them, the perceptions of students are remarkably realistic. It follows, therefore, that no amount of technical, "vocational" or agricultural instruction taken alone within the formal educational system is going to check the movement from the

rural areas, reduce the volume of unemployment or indeed necessarily have any effect, in itself on the rate of economic development. We must accept the fact that those factors which really give the impetus to early economic growth are far more subtle than the proponents of vocational education suppose. In effect, we would suggest that the crucial variables lie in the structure of incentives within the economic system and the degree to which the institutional framework provides a milieu which is supportive of entrepreneurial activity. Without such a milieu no amount of vocational instruction can be effective since the skills acquired will not be utilised. To put the issue more colloquially, in the *initial* stages technical and vocational instruction is the cart rather than the horse in economic growth and its development depends upon real and perceived opportunities existing within the economic structure. Thus its provision must be *directly* related to those points at which some development is *already* apparent and where demand for skills is beginning to manifest itself. . . .

Initially, the production of really high-level technical manpower is perhaps the easiest problem. There is no question here that formal education institutions at the University level must take the general responsibility for the production of professional workers, though there is a need to make sure that curricula are suitably modified to meet the needs and actualities of the local environment. There is no doubt that certain portions of prevailing instruction can be adapted more closely to actual work situations in which professional workers are to be later involved. There is perhaps a need also to ensure that study, even at this level, is combined with periods of field-experience so far as high-level specialists are concerned. Nonetheless, we contend that, at present, African needs for the uppermost levels in trained manpower are not so great as supposed. The issue here is to see that limited numbers of individuals possessing high-level skills are used effectively and economically. It is frequently evident, for example, that highly trained engineers in some areas are heavily involved in routine administration and paperwork which could be effectively performed by individuals possessing no professional skills. Professional technical training is enormously expensive and the production of professional workers must be paralleled by economy in their use.

It should also be noted that at this level there is less shortage of applicants for high level training than there is an acute shortage of applicants who in fact, can successfully complete these demanding high level courses successfully. This points to the need for more

adequate *general* education at the secondary school level and a more thorough preparation in basic subjects on the part of aspirants. Indeed, we should go further and suggest that this is the really effective thing that the schools can do at every level. Rather than attempt to load them with vocational subjects the provision of a sound general education with a bias towards general science and English, essential at all levels, can provide the basis upon which later effective specialist training can be given. Here indeed, is the area in which imaginative and constructive curriculum work can be undertaken. . . .

In summary [we] . . . point to the possibility of utilising various types of vocational training without, at the same time, forcing vocational education into the formal school structure or providing massive developments in the form of specific technical and vocational schools for full-time pupils. To be sure, such institutions must play a role in development but their number should be expanded carefully, they should be closely associated with actual developments in the economy through the provision of "sandwich" and short courses and their clientele should be composed to a large degree of individuals who are actually involved in commerce and industry. As far as possible some of the burdens of vocational training should be shifted to those groups who are actually demanding skilled labor of various types.

In this context, the role of the formal schools becomes clearer. At present, their most marked inadequacy at the lower and intermediate levels is that they perform relatively ineffectively the basic functions of general education upon which further vocational training can be given with profit. At present a number of vocational schemes are hamstrung by trainees' lack of command of basic skills in literacy, English, computation and general background. If at present the schools perform these latter functions ineffectively, it is patently absurd to expect them to incorporate a range of auxiliary vocational activities—quite apart from the relative absence of staff either competent or willing to undertake such activities. Given more limited objectives the schools can indirectly make a significant contribution to development of technical competence, by turning out pupils able to effectively absorb and utilise specific forms of vocational training. Lack of auxiliary processes of vocational training does not justify the argument that the schools should or can provide a good substitute; the main problem is to stimulate the growth of informal ancillaries without which no self reinforcing economic growth is likely to emerge.

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chapter 7

Social and Moral Factors in Economic Development

7-1. Social requirements of technology

"We find it difficult to realize the truly huge amount of social change that must accompany the transition from an essentially static, premodern society to a dynamic, modern society."

CHANDLER MORSE

To what extent is economic development a social phenomenon? Chandler Morse raises that question about technological development, which is very much a part of the fabric of economic growth. As Morse points out, those of us who are living under conditions of rapid technological change are likely to forget how much it has become integrated into our social beings. Not only have we learned to live with change: we also encourage and reward those who promote it. It is, of course, difficult to say precisely to what extent social factors contribute to economic development. Certainly they are supportive of it, and it is difficult to conceive of an energetic economic advance without concomitant social advance. As Morse indicates, technological change is not "something which just happens, and to which one adapts." It is a part of the total social scheme of living.

We may ask about the role of the school in supporting modern social values that are congenial to economic and technological advance. As we point out elsewhere in this volume, schools in the developing countries represent the modern elements in the society. They tend to teach modern rather than traditional values, and teachers

tend to represent "city" rather than "rural" modes of behavior. For this reason the schools are frequently the mediators of the culture, the intersection point between the traditional and the modern. Much depends upon how well the schools play this role. At worst, they may alienate the child from his traditional culture and help to thrust him unprepared into the modern world where he takes on the form but not the substance of modernity. We would have more confidence in education that had as its purpose the attempt to usher the young into the modern world and its economic values, without rejection of those values that may prove useful in giving continuity to change. We believe the cause of economic development is better served under conditions of human cohesion than under those of disruption, and that the school has a contribution to make toward this end.

[Chandler Morse]

We in the Western world live in a society which has woven technological change into the social fabric as part of the over-all design. Infant's toys encourage intelligent manipulation, then investigation, then puzzle-solving. Science finds its way into school primers—and comic strips! Machines influence patterns of work in the home, not only in the factory. Innovation is not only accepted, it is a key to success and a gauge of fashion.

All this is especially true in the United States. We are a young society, established in a nearly empty continent. With no initial historical relics to revere and preserve, we have come to value the new above the old. . . . A Japanese student remarked to me the other day on the advantage we have over his country when it comes to getting certain kinds of things done. One hesitates longer to destroy a temple or a tree that has stood in the same place for a thousand years than to pull down a building that has not yet completed a century of service.

There is no need to multiply illustrations. My point is that, living

Chandler Morse, "Social Factors in Technological Change," in John W. McConnel, *The Role of the University in Promoting Change* (Ithaca, N. Y.: Cornell University Press, 1962), pp. 31-35.

in an environment of continual change, we often find it difficult to realize the extent to which technological advance is a social phenomenon—a consequence of our values, of the way our society is organized, of the methods we have devised to reward, and so to encourage, technological innovation. It is also a consequence of the fact that those who are injured by technological progress—and some always are—have ample opportunities to escape, or to obtain help from those benefited. Were this not so, the vested interests of resistance to change would be far more effective than they are. . . .

My concern is with the external significance of our tendency to think of technological change as something which just happens, and to which one adapts. Because we have absorbed great changes in our stride, we find it difficult to realize the truly huge amount of social change that must accompany the transition from an essentially static, premodern society to a dynamic, modern society. The problem for the less developed countries is similar in kind to that with which automation may confront us, but it is much more serious in degree.

Let me indicate briefly some of the social changes that must accompany technological development, and some of the difficulties that must be overcome. The technological development, we must remember, involves more than the teaching of science and the training of workers; more than the adoption of new techniques of production; more than the use of machines, powered by mechanical energy, to save and augment muscle power. It also requires the concentration of production on farms, and in factories, which must acquire productive inputs, and dispose of products, through commercial channels. This means that the requisite inputs—labor and productive wealth—must become “commodities” in some fundamental but initially unfamiliar sense. This process of “commoditizing” inputs is one of the focal points of social change in developing areas.

First consider labor. The problem is to create a working class, a class of wage laborers. In premodern societies, productive activity is carried on entirely or largely within the family circle. It is a way of life. The interests of the parents as father and mother are not distinguishable from, or in conflict with, their interests as producers of subsistence for the family. But technological development, as I have characterized it, requires that the productive activities of the society be increasingly performed *outside* the family context. Labor, in short, must become a commodity to be disposed of and acquired in a market. This commercialization of labor creates problems.

There are the problems of the terms on which labor is to be hired and fired, the conditions of work, and the maintenance of discipline. Fundamental to all these is the problem created by the fact that the interests of the employer and those of the worker—as an individual and as a breadwinner for his family—cannot be identical. The interests of employer and employee do, of course, coincide over a wide range, but not wholly. One of the basic social adjustments required in a modernizing society, therefore, is that of achieving a mutual perception and acceptance of the respective interests of worker and employer. Related to this is the need to achieve a mutual understanding concerning the ways in which these interests can best be served in a framework of reciprocally advantageous cooperation. To achieve a commonality of views on these matters is by no means easy, and in any case takes time. The worker is responsible for meeting the requirements and standards of the job, and the employer for providing the requisite materials, facilities, and conditions. But understanding of these reciprocal responsibilities is not learned in school, it comes largely with experience. Absenteeism, consequently, is a universal phenomenon in newly industrialized societies (including, we would do well to remember, Great Britain during the early days of the Industrial Revolution). Another phenomenon, due in this case to a deficiency of employer responsibility, is poor working conditions. Both phenomena together add up to low productivity.

A further difficulty is that there is a certain asymmetry in employer-employee relationships. The employer must, in a certain sense, be "irresponsible" with respect to his employees—that is, he must be free to fire workers when they are incompetent, or when sales decline, without being responsible for what happens to them or to their families. Some countries, especially in Latin America, have mistakenly endeavored to limit the employer's freedom to act in this irresponsible way. They force him to show cause, ultimately perhaps before a court, before he can fire workers. This, unlike unemployment compensation, undercuts the basic principles of efficient management.

To develop a class of entrepreneurs is as difficult as to create a working class. The role of modern businessman, or manager of an enterprise, is quite different from that of a hereditary landlord or member of an aristocracy of blood or wealth. To the traditional elites, personal statuses and relationships are of crucial importance and must be maintained. Behavior vis-à-vis other people is based far

more on "who you are than on what you are." . . . When "who you are" is important, the impersonality of the decision-making process, as we know it, comes hard. Biases against social inferiors and in favor of social superiors, and something like cutthroat competition in dealings with equals, interfere with objectivity. In our society, managerial capacity has become a commodity, to be hired or disposed of as needed. In newly industrializing societies one's social connections are likely to be crucial. Firms tend to be managed with a view to maintaining family control, not to achieving efficiency or growth.

Closely related to management is the concept of wealth. To us, wealth is primarily a source of income, to be utilized accordingly. Only secondarily is it a source of prestige. In premodern societies the reverse is generally true. The prestigious forms of wealth tend to differ. Land predominates in Latin America, jewelry in India, cattle in Africa, but in each case the point is the same. As prestige symbols, wealth in these forms can be and is measured in physical units—acres of land, pieces of jewelry, head of cattle. Its economic dimension, which ought to be the capitalized value of its income-yielding power, is unknown or wholly secondary. Enhancement of the power of wealth-assets to yield income is therefore largely irrelevant. Under the circumstances, land, buildings, and equipment have much less the status of commodities than they do with us, and the opportunities for enterprising and perceptive businessmen to put together new productive combinations of such assets are far less well developed.

Even if wealth comes to be valued in economic terms, there is a further difficulty—the lack of ready opportunities to finance the creation or expansion of a business. Thrift in the sense of saving, and then investing in income-yielding securities, plays a crucial role in providing mobility and flexibility to our productive system. But the creation and acceptance of intangible claims to real wealth require the existence of special conditions. The value of securities depends on factors over which their owner has no control. Moreover, the mutual trust on which all fiduciary relationships depend, and which is necessary if "financing" is to become a marketable commodity, is largely lacking in premodern societies. Those societies may have banks and other specialized financial institutions, but they do not have financial markets—or, at best, have them only in rudimentary forms.

The foregoing remarks do not describe any particular country.

No part of the world today is wholly untouched by modernism. But more people live in largely premodern societies, or in backward pockets of partly modernized countries, than live as we do. In some degree, therefore, and often in high degree, the characteristics I have mentioned, and the necessary social changes I have indicated, apply to the majority of people alive in the mid-twentieth century. The social significance of technological change for this majority may be summed up in three points: *first*, that the commodization of inputs to the productive process is a necessary aspect of technological advance in the developing regions of the world; *second*, that this process of commodization requires profound and difficult social changes; and, *third*, that these changes are interlocked with each other. The changes are, moreover, considerably more complex than my brief remarks can suggest. Indeed, we are still so ignorant concerning the role of social factors in technological change that we cannot say how much of the iceberg we have identified. Even less do we know how to facilitate social changes of the kind required for development.

7-2. Moral values in economic development

"We tend to overlook the creative relationship between the sources of human motivation and will, and their expression in economic and material change."

HARRY D. GIDEONSE

In the previous selection Chandler Morse asked to what extent economic development is a social phenomenon. Now Harry D. Gideonse poses this question "To what extent is economic development a *moral* phenomenon?" Accumulating evidence points towards both social and moral considerations as being central in economic advance. American economic history presents some rather compelling evidence to indicate that behind our material growth were values—such as thrift, respect for property, accountability, present denial for later good, and a

strong faith in the future—that made our forward economic thrust possible. The presence of these qualities gave an undergirding of strength and motivation to our modern economic system. What are the chances of economic development where these values are lacking or where their opposites are the accepted values? This is the question to which Gideonse addresses himself, and in doing so he makes a strong plea that we widen our vision of economic development beyond “mathematical models,” and that we not consider “production” and “consumption” in educational investment as separate compartments, but that we learn to synchronize them effectively with economic growth. Concludes Gideonse: “Free men will not make the sacrifices required for development unless they see them as methods for realizing the picture of themselves which is suggested by the values by which they live.”

[Harry D. Gideonse]

The relation between economic growth and educational development is not merely a question of formal education. It is also a question of the type of education—or formative conditioning—which is informally but pervasively the fruit of growing up in a given “culture.” There is a need—and the example of Turkey is suggested—in which the most important requirement for economic development is a religious reformation which will give adequate moral recognition to material and physical motivation.

How can traditional determinism of the Moslem variety, or the deep-seated Indian respect for physical and material renunciation be reconciled with the need for initiative, with the respect for work and the material motivations that are the conditions without which a program for economic development will never get out of the blueprint stages? It is easy to draw up programs for educational reform designed to serve the economic needs of a country—there are shelves of such reports in India—but how can a democratic government make such reforms effective if they call for a change in the values of

Harry D. Gideonse, “Economic Growth and Development,” *College and University*, vol. 38, no. 4 (1963), pp. 429-433.

the people themselves?¹ Have the insights of Max Weber and R. H. Tawney concerning the moral origin of Western economic institutions nothing to contribute to our thinking about the economic and educational development of countries in which exactly the opposite religious attitudes prevail? Is it naïvely assumed that such moral qualities will be a by-product of economic stimulation?

Adolf A. Berle has given a fresh and creative statement of the economic and cultural relevance of these factors in his recent volume entitled *The American Economic Republic*,² in which comparisons of the development of Utah and Nevada, of Israel and Iraq, and of the Netherlands and Bulgaria are used to prove that the vital currents in economic and cultural productivity are related to ethical motivation as it relates to economic growth. His concluding chapter on "The Value System and the Transcendental Margin" supplies an admirable statement—based on fresh observation of contemporary data and not on inherited sociological doctrine—of the direct relationship between an effective value system and the desires and behavior of the population of a given society. The word "transcendental" has no religious significance to Berle—it simply refers to the effectiveness of "values," irrespective of their secular or religious origin, and irrespective of the subjective evaluation of their sources as "good" or "bad."

It is characteristic of the modern form of materialist heresy in the study of the rich cultural heritage of free society that many of our social scientists, with their fashionable pursuit of "physical science" and "mathematical" models, and a corresponding contempt for "factors that cannot be measured," can speak of the "take-off" stages of economic development as if they were a mechanical series of phases in a materialistically predetermined pattern of evolution. The traditional societies of Asia, Africa, and Latin America show no inherent dynamic of development, and their present state of development has sprung from varying historical origins and it is culturally related to a different sequence of "stages" of growth. We tend to overlook the creative relationship between the sources of

1. Cf. my more elaborate treatment in "Colonial Experience and the Social Context of Economic Development Programs," ch. 17 in *Economics and the Public Interest*, ed. by Robert A. Solo (New Brunswick, N. J.: Rutgers University Press 1955).

2. New York: Harcourt, Brace and Co., 1963.

human motivation and will, and their expression in economic and material change.

If we refresh our awareness of the role of these moral factors in the growth of our own society, we will recognize the strategically vital role of a conscious and intelligent concern with the cultural prerequisites of a free society, which is another way of saying that "production" and "consumption" in educational investment should not be considered in separate compartments but that they must be inextricably interwoven in an educational policy that is designed to synchronize effectively with economic growth. Free men will not make the sacrifices required for development unless they see them as a method of realizing the picture of themselves which is suggested by the values by which they live. "Without vision the people perish."³

Let me summarize some of the qualities that are essential moral prerequisites for economic development. There must be a willingness to control appetite, that is to say, a willingness to produce more than is consumed. There must be a willingness to invest the savings, either individually or collectively. There must be an open attitude toward innovation and initiative. Enterprise does not flourish where the status quo is sacred, and freedom cannot even be born where there is—in Lord Acton's words—a "belief in the function of ghosts to make laws for the quick." There must be respect for the future and for children. There must be respect for a promise and for property. There must be a sense of responsibility and accountability, and a reasoned respect for calculation in the determination of social and private objectives, and in the arrangement of the rank-order of priorities.

These may seem to be academic and theoretical considerations, and the traditional representative of the hard-boiled financial and economic point of view may dismiss them as "mere sociology." They are, however, the core of the problem. It is the presence of these qualities which made the Marshall Plan a historically unparalleled success. It is the absence of these qualities that explains the sterility of many of our well-financed projects in Latin America and in Asia. If we ignore this aspect of the educational requirements of a sound

3. See also the pages on "goal-setting weaknesses" in Robert L. Heilbroner, *The Making of Economic Society* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), pp. 230-236, and his provocative and courageous *The Great Ascent* (New York: Harper & Row, 1963).

development program, the most effective and meticulous co-ordination of the vocational and technical aspects of education with an articulated program of physical development will fail to take root.

The moral prerequisites of development are not a subject for sermons. They reflect the hard and tough experience of generations of colonial and post-colonial effort. I recall an incident during a trip to Pakistan about two years ago. My trip was concerned with the relations of educational and economic development. I was fortunate enough to be in East Pakistan at a time when a huge conference of Pakistani scientists and economists was considering the problems of economic development. The opening speech at the conference was made by a leading Pakistani physicist, at the time a professor at Cambridge. Here he was—a physical scientist talking to physical scientists. What did he talk about? The Koran. Why did he tackle a religious, even a theological subject? Because he knew that the basic hurdle to any program involving a deliberate and conscious program of social change was rooted in the pervasive religious conviction that “everything that is, is the will of Allah,” and that therefore anything that is designed to change things as they are is by definition subversive of the will of God.

And so our physicist spent almost all of his time analyzing the teachings of the Koran about the problems of human suffering and poverty, and concluding that since Allah had defined the tolerance of poverty as sin (*Kufir*), it was clearly the will of God to be doing what the conference was now proposing to do. He recognized the true rank-order of priorities. If the ground was not morally cleared by a redefinition of prevailing theology, there would not even be an audience for the views of physicists and economists concerning the direction of social change. Comparable examples could be cited from all over the world, including the United States.

It is not merely a question of the removal of ancient moral hurdles to development. It is also a problem of moral reconstruction of a pattern of social cohesion that will be strong enough to contain the centrifugal forces that are released by economic and educational development. It is impossible to develop a society out of nothing but transition and mobility, and we in America could supply some gory details concerning the need for social reconstruction where excessive mobility has eroded social cohesion to the points of normlessness, or what Dürkheim's sociology called “*anomie*.” If we are to build a social context in which the ideals of a free society might

be meaningful, the social and educational aim of economic productivity is clearly inadequate.

In this paper I have considered education as an activity that develops human capital and human capability in relation to economic productivity. I have dealt elsewhere with the cultural goals of education.⁴ Education is vitally concerned with consumption as well as with production, and its commitment to the goal of the enrichment of personal and cultural satisfaction is inextricably interwoven with the need for a social context that will have the strength and the cohesion to permit the mobility that is an unavoidable condition of economic development.

Economic analysis can only interpret the search for economic productivity. It does not set social, cultural, or personal goals. All of these ends are interdependent. They are inextricably interwoven. The cultural achievement of a free society is historically and analytically related to the flow of wealth from which it draws its sustenance. Insofar as we are concerned with the optimum economic use of limited material and human resources, we are also concerned with the creation of the material circumstances in which cultural options remain or become a possibility. The investment in human capability is an economic means of achieving the more diversified cultural ends of free society. When we confuse the economic means with the cultural goals themselves, it is time to recall Alexis de Tocqueville's warning to his materialist French contemporaries that "the man who asks of freedom anything other than freedom itself is born to be a slave."

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4. Cf. Harry D. Gideonse, *On the Educational Statesmanship of a Free Society* (New York: Woodrow Wilson Foundation, 1959), and "The Literature of Freedom and Liberal Education" in *Measurement and Research in Today's Schools* (Washington, D.C.: American Council of Education, 1961).

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part four

EDUCATION FOR CULTURAL AND SCIENTIFIC DEVELOPMENT

In the preceding chapters on economic development, we treated the cultural and scientific concerns as complementary to the main business of economic growth. In this section we reverse the emphasis and give priority to culture and science, believing as we do that their influential and creative role in the development of nations is neglected and little understood.

What do we mean by cultural and scientific development? We mean development of those intellectual, inquisitive, and artistic elements of man's total culture that may or may not bear a direct relationship to what are ordinarily considered his material well-being and security. This definition we hope will not be misunderstood as an invidious distinction between "the finer things of life" on the one hand and "the down-to-earth practical matters" on the other. We do not think such a distinction is valid. Further, such a distinction may be positively harmful in that it breaks into pieces matters that are best left whole and complete.

Take, for example, the concept of work. Is the act of working

an expression of cultural behavior? A good case could be made for it. Or is work economic behavior? It is usually so regarded. Actually, it is neither, exclusively, for it may partake of each. And we hope it does, for we are inclined to feel that work should properly be considered as both cultural and economic.

Can one, then, validly speak of education for "work" on the one hand and education for "culture" on the other? Is it possible with any precision to characterize that education designed to prepare people exclusively for work? Can we with any more precision define education that is exclusively for cultural understanding and appreciation? In our effort to find answers we often categorize education as vocational (or professional) and general (or liberal). But people keep slipping the categories. The professionally educated man turns out to have keen and liberal insights and the liberally educated man shows remarkable practical acumen.

Yet, we have carried this dichotomy into the field of human resource development planning. We speak of education for "consumption" and education for "production": education for consumption is not supposed to have economic value because it is for the individual's own satisfaction, while education for production generates economic benefits both for himself and others. Accordingly, we make our educational investment in education for production. Somehow we must soon confront the question of the value to society of individual fulfillment and satisfaction. Could it be that it, too, may generate some benefits beyond the individual?

The distinction made between the "manpower approach" and the "cultural approach" to assessing the needs of education poses the same dichotomy. Manpower needs are quantifiable. Cultural needs presumably are not.

We must, therefore, assess the needs of education and determine policy for it by using charts, graphs, and other forms of quantified data. From these calculations and representations come educational plans carefully designed to educate men and women specifically to do the nation's development work. Carried to this extreme, one kind of person for each kind of job. But is that a sufficient task for education, assuming it is possible? Indeed, is it desirable?

When, therefore, we speak in this volume of cultural and scien-

tific development, we are speaking of what we believe to be independent processes that always condition man's economic activity but because of their vast scope may and do range beyond the economic needs and pursuits in his life. We find the concept of cultural and scientific development a useful intellectual tool for calling attention to facets in the development of nations that a one-sided view of development as purely economic might lead one to overlook.

There may be a number of reasons for the relative lack of attention to the concept of the cultural development of new states. One is, of course, that even the casual visitor is so struck by the disease, the poverty, the inefficiency, and the disorganization that usually characterize new lands, especially as measured by Western standards, that other observed deficiencies are swept from his mind. Another reason may be that "cultural" representatives of the West who were sent into the developing nations in the past have, because of the very process of self-selection and their view of their mission, carried with them a particular conception of cultural development that is not now, if it ever was, apposite. To most colonial educators cultural development meant the expansion of a replicative school system that measured cultural and scientific advance by the number of students who could clearly demonstrate (by examination) that they had been pumped full of a foreign heritage. To the religious missionaries it could be measured by the number of converts to Christianity. Viewed within such an intellectual framework, the multiplication of churches and schools represented development, and the processes of development were clear and unambiguous even when difficult of achievement.

With such ambiguities and uncertainties beclouding the idea of cultural development as it is generally used, it is imperative that we stipulate the *meaning that we intend the expression to carry here*. The meaning of cultural development, which we believe our selections reflect takes into account one of the important cultural dilemmas facing the emerging nations. So too do each of the criteria we would use to judge the presence of cultural development. The first of these criteria might be called the *democratic criterion*. It requires that cultural and scientific development be measured by the extent of diffusion of the fruits of its achievements. With limited resources, emerging nations must

choose between extending cultural opportunities and the products of cultural achievement to the many or to a select elite. According to our standard, cultural development consists less of books in the hands of a lettered few than of libraries open to a literate many, not so much of architecturally sophisticated palaces for princes or presidents as of simple beauty in the lives of men, not so much of communities of scholars, lonely islands in seas of ignorance, as of a community of citizens with knowledge oriented, extended, and available for the daily life of them all.

The second standard might be called the *dynamic criterion* in that it demands that *cultural and scientific progress be measured in terms of creation and innovation, not merely in terms of recapturing and revering a past*. New nations are understandably interested in recapturing their past, in rediscovering and even revering a heritage often denigrated during colonial and missionary periods. But cultural and scientific development consists not only in finding past roots but also in using the nourishment such roots provide for flourishing new growth.

The third standard we employ might be termed the *distinctive criterion*, it ordains that *cultural and scientific progress be measured in terms of the successful integration of unique and indigenous themes into the universal heritage*. Such a standard rejects the invidious minor theme motif expressed by a ranking professional educator in an African state, who recently commented to one of the authors, "We need further Africanization of the primary school curriculum, but Africanization has nothing to offer the *lycée*." It rejects equally the nascent provincialism of many emerging nations that would, in the name of an exclusivistic nationalism or race consciousness, pervert, repudiate, or reverse mankind's slow march toward mutual understanding and mutual appreciation.

The meaning of these criteria will become increasingly clear to the reader with each of the articles that comprise this part, for they have been selected in terms of these criteria. Ki-Zerbo's discussion of Africanization and Kabir's discussion of promoting Indian cultural unity reflect most clearly, perhaps, that healthy self-respect underlying the willingness to incorporate indigenous cultures into the wider heritage. Edward Shil's discussion of the conditions necessary for scientific inquiry and creativity illustrates the dynamic quality of the development and stands in sharp con-

trast to the often prevailing static reverence for a past, indigenous or foreign. Apter's vision of a wedding in the emerging states of technology to science and of science to the humanities suggest the potential interplay of many areas of inquiry and development in new humanely oriented civilizations of the future.

But is such a concern for cultural and scientific development really justified in impoverished lands? What claim is there for priority in allocating scarce resources for such development? Some have argued for it on instrumental grounds. Science and its offspring, technology, are readily linked to economic development. "Sooner or later," writes Shils, "the political, educational, and administrative elites will have to pay more than ritual respect to a policy for the furtherance of research and training in science and technology." The humanities are less easily but nonetheless readily hitched to the rising stars of national identity and political development. "Few things are so conducive to national unity as a common literary heritage," writes Humayun Kabir in one of the selections that follows in this part.

But it is not primarily on such grounds that we present the case for cultural and scientific development here. We are not concerned first and foremost with its contribution to the strength of the state, however great that contribution may prove to be. We are not concerned with it primarily for the benefit of future generations or the future of a given art or science, although there is no reason to believe that creative genius or new contributions will arise only out of the soil of presently developed lands. Rather, we see it as urgent primarily because the things we would wish for people in a new land are what we would wish for all men everywhere: that they be sharers in the world heritage, proud recipients of their own culture, and participants and creators in the further extension of culture. They are qualities of the good life. As such, for educators in particular, they serve as a healthy antidote for those partial systems of thought that attempt to make economic systems and political operations the inclusive criteria of healthy modernity.

John Galbraith has written elsewhere that there is not one problem of economic development, but that there are as many problems as there are stages of development. So it is also with cultural and scientific development. Among the emerging nations are some whose cultural and scientific development has been

arrested—cultures trapped by inadequate means for further cumulation and growth, often with local languages that have no written form and heritages being lost with a vanishing oral tradition. Others, perhaps no more fortunate, have fallen into the concealed but all the more insidious trap of slavishly imitating one or another of the Western cultures. Some, fortunately few today, appear hopelessly caught within the circle of their own traditions and unable to pass beyond the circumference of their past vision. A few, like India, are inheritors of as rich and complex systems of thought as man has yet created. In each the problem of cultural and scientific development is different. In each education for cultural and scientific development faces unique challenges and requires difficult decisions about the kind of education best suited to the country's development.

Different countries are making these decisions in different ways. For example, a few years ago an outside educational planning mission for an impoverished African state regarded as illusory the orientation of education to non-economic sources of satisfaction. Stated the mission: "Our recommendations are founded on the economic premise that education has such a part to play in developing and administering the country that its other powers, for example to widen the general level of culture, must be ignored."

Happily, other equally impoverished African states have adopted quite different approaches to sound development and human well-being. One such state, on securing self-government, created a literature and publications bureau that has not only begun an active program for capturing and developing its folk history and music through the participation of primary school pupils and teachers but had within its first three months attracted over one hundred original manuscripts covering the range of its literary forms.

In another African state where education and the fine arts are happily wedded in one Ministry, a commission reminded schools and teachers that:

our culture, with its highly developed school of poetry, music, and theology . . . has much to contribute to our way of life today, in linguistic and artistic beauty, in subtle reasoning, and most of all in concepts of dignity, morality, and religious duty. The reconciliation of

modern economic pre-occupations with this calm unhurried contemplation of eternal values must be the constant concern of all who are engaged upon educational tasks. . . . Our contribution to the world's cultural prosperity will be superficial and banal unless it is permeated with our own special sense of the past and its continuance as present reality.*

One of the toughest challenges that educators face is to determine exactly what the function of education shall be in their developing lands. Broadly, two alternatives exist: (1) Educational investments may be made solely on the basis of direct and anticipated economic return, or (2) they may be made with concern for the total development of the children and youth of the nation.

Cultural development is more than cultural transmission, more than passing on a given heritage. Cultural development has its creative, generative force. And it is from this force, fully as much as from any current plane of culture that an appropriate education assumes its character. For the creative element that is at the heart of the concept of development means that an education that is concerned solely with transmitting a heritage—be that heritage foreign, indigenous, or cosmopolitan—and that fails to enliven the imagination or promote the spirit of invention can never be an education for development worthy of the name.

* *Education in Ethiopia: A Survey* (Addis Ababa: Ministry of Education and Fine Arts, 1961), pp. 36-37.

chapter 8

Cultural and Scientific Development in the New States

8-1. Acquiring modern abilities

"The task is to try to determine the demands placed upon people by the modern state."

LEONARD W. DOOB

A state that is to be modern and free must have abilities of a particular kind. One that is to be traditional and tribal must have abilities of another kind. And one that moves from being traditional and tribal to modern and free must have yet another set of abilities. The development of these transitional abilities is never easy nor ever fully understood either by modern or traditional men.

Yet, it is along this precarious road of transition that millions of citizens of the developing nations are venturing. The road leads from ancient villages to modern and complex cities, from self-sufficient tribes to impersonal nation-states, and from barter to money economies. Although the distance to be travelled is great in terms of social and cultural adjustment, the time available for travelling it is short. Whereas the citizens of Western countries have taken generations to make the great change, citizens of the developing world are attempting it in decades.

Leonard W. Doob's contribution reminds us of the

abilities required for life in a modern and free state and analyzes some of the difficulties that Africans encounter as they set out in that direction.

By implication Doob lays a heavy burden upon education. Education must define its purpose more broadly than in purely economic terms. For the modern state requires modern men equipped intellectually and psychologically with the skills necessary for modern living.

[Leonard W. Doob]

It is painfully obvious that shifting from tribalism to nationalism is neither swift nor automatic and that many newly independent countries are themselves experiencing difficulties and also often creating troubles for others. The varied explanations for this state of affairs reflect numerous economic, political, social and ethical problems which these lands in Asia and Africa must face and somehow resolve. The present analysis is focused upon a question that includes aspects of all such problems but in a rather specialized form: in what ways do people in a nonliterate society change as they and their country seek to function as a nation in the modern world?

Problems arising from the shift strike the observer in Africa whether he is relaxing or attempting to carry on research. Three anecdotes may serve as introductory illustrations. The writer was having his hair cut in the air-conditioned barber shop of a very modern hotel in a newly independent country in West Africa. "When," he asked the barber, "will the rains come? Everything seems so dry and dusty." The man turned off the electric clippers and said in fine English, "They will come soon." "Why do you think so?" His eyes spread out and his mouth came closer to the ear of his customer. "They will come soon because there has been blood; and there must be blood first before it can rain." Blood, he recalled, had been spilled during a ghastly accident the previous night. Elsewhere, as various countries in West Africa were loudly protesting the French announcement in 1959 that atomic bombs would soon be exploded in the Sahara Desert and as news of their protests was spread in African newspapers and broadcast over the radio, the investigator pretested a straightforward,

Leonard W. Doob, "From Tribalism to Nationalism in Africa," *Journal of International Affairs*, vol. 16, no. 2 (1962), pp. 144-155.

open question: "What do you think of the plans of the French to explode bombs in the Sahara?" In a small village not distant from the Sahara and swept each year by the harmattan, the modal reply of the first five informants was, in effect, "Who are the French?" Then, far to the south, the writer once watched one of a group of Africans whose abilities were being individually assessed so that they could be assigned to suitable jobs. The man's task was to assemble from a pile of wooden blocks a structure exactly the same as the model provided by the examiner. Both the blocks and the model were on the table in front of him, the former to his right and the latter to his left. He clearly comprehended the instructions, studied the model intently, then set to work, but never once did he look back at the model to check his own performance which, consequently, turned out to be quite poor. The barber, it appears, was technologically up-to-date, while retaining a prescientific conviction; the villagers had not been affected by the omnipresent mass media of their own country; and the manual worker was using a method not suited to the task at hand. In each case behavior was exhibited which will be altered, however slowly, as African countries become modern nations.

Abilities

The initial conceptual task is to try to determine the demands placed upon people by the modern state. The driver of a car must be able to see the road ahead, to coordinate certain bodily movements, to respond quickly to sudden crises, and so forth. What psychological abilities, then, do modern citizens possess? Let four be postulated. First, people have the skill required to manipulate the machinery as well as the paper that records and directs production and consumption. Some are able to organize and control large numbers of people in order to achieve appointed goals in industry, government and social life. All comprehend to some degree a vast set of symbols, such as those involved in print or motion pictures. This comprehension includes some understanding of how government functions, without which the demands of distant officials for taxes or for pledges of loyalty are unintelligible or seem unreasonable. Finally, people have some insight into science or at least they seek finite causes for many, but certainly not for all, of the events which engulf them.

Can these four abilities—or any others which might be specified—be acquired by Africans? Unquestionably all evidence indicates that

Africans can realize them; indeed many Africans already possess them.

To acquire and then exercise many of the abilities required by Western society, people strive for goals attainable only in the future. Children go to school so that after graduation they can realize tangible or spiritual benefits. People endure the pain of being inoculated or the expense of digging sewers to protect themselves from disease later on. Sentence is not passed upon a suspected criminal immediately; he is entitled to "due process" which means that an anxiety-evoking delay occurs before he hears the verdict. Modern armies ordinarily do not rush at each other when their countries have suffered minor or even major grievances; they curb themselves or are curbed while negotiations take place and a cold war is protracted. Capital must be saved if industry is to expand or, unless credit is extended, before a trinket or a machine is purchased. In contrast, the postponement of a present gratification and the enduring of momentary discomfort for the sake of future satisfaction are probably encouraged to a much lesser degree in African societies. There the tendency is for people to be controlled more by social pressures and by the traditional requirements of the roles to which they are assigned than by plans that can be realized in the future. Let there be no misunderstanding: Africans must also look ahead when they hunt or plant crops, when they perform a rite to ward off evil spirits in the years to come, and when they plot revenge instead of exploding on the spot, but more frequently their behavior is likely to be regulated by forces that are immediately present. Differences between tribesmen and nationalists with respect to both temporal orientation and to the pattern of rewards and punishment, then, are quantitative rather than qualitative, yet no less important.

A rather risky hypothesis would suggest that Africans have less "energy" at their disposal and hence are not eager or able to endure too readily the strains and tensions of industrialism. Obviously a tropical climate imposes limitations upon human ambitions; still, it must be quickly added, its effects are probably exaggerated, especially by Westerners from temperate zones. Also, the more southern and the higher sections of Africa enjoy cool, refreshing temperatures. More important to account for a low energy level is the interacting combination of disease, diet and mode of existence. Some characteristic tropical diseases, such as malaria and kwashiorkor,¹ induce momen-

1. A children's disease arising from a protein deficiency.

tary or semi-permanent lassitude. The behavior of many Africans may be ultimately affected by their diets which, by Western standards, are deficient with respect to proteins and/or fats. Some African societies which badly need the nutrients available in meat and milk lovingly tend cattle for their symbolic value or for purchasing wives and seldom if ever use them as a source of food. Again and again, it has been suspected, though not proven, that Africans entering Western occupations for the first time are more relaxed or at least are less driven to produce at a fast tempo largely because they lack the motivation to do so. At any rate, there is some evidence indicating that the incidence of hypertension among Africans is lower than in the West and that, when they acquire a Western diet or perhaps a Western way of life, their blood pressure literally rises.

Institutional changes

The changes in Africans so far described are those required by the modern state. Conceptually, it ought to be possible also to anticipate the specific institutions that will be adopted from the West and then to consider their ensuing effects upon behavior. Certain Western devices and techniques are apparently irresistible for Africans. The devices satisfy or seem to satisfy needs more efficiently or pleasantly. Everyone must move from place to place; hence, at first bicycles, then motorcycles and finally motor cars are considered exceedingly useful. Everyone seeks protection from rain and cold and usually would have that protection be relatively permanent; hence a tin rather than a thatched roof, brick or stucco rather than adobe or straw walls and indoor plumbing rather than outdoor wells and latrines grow to be important objectives for most Africans. Everyone must protect his body and would make that body more attractive; hence quickly purchased and gaily colored textiles replace bark cloth, and sewing machines are obviously nimbler and quicker than human hands. Cuisine may resist modification for generations, no doubt because people's tastes in food are acquired at an early age; and yet some foods from the West like ice cream and vegetables in tins, as well as beverages like tea, soft drinks and whiskey are able to break through this strong traditional barrier. Then the practice of medicine in the Western manner eventually receives almost universal acclaim. The bodies of people everywhere are plagued with annoying or painful illnesses, and means which can be adopted to mitigate the suffer-

ing are unquestionably desirable, provided that, as suggested above, they offer almost immediate relief in the manner of pills and splints. In sum, such changes result in an expansion in the number of human drives to be reduced and require not only a more complex society to produce and distribute the corresponding goods and services but probably also more complex people to demand, consume or utilize them.

Changes in the major symbol systems are also unavoidable as contact with the West increases. In most of sub-Saharan Africa, the introduction of a standardized monetary system heralds the gradual disappearance of cattle as a symbol of status and wealth and as a form of currency. Attention need only be called to the contrast between live cattle and paper money or metal coins to appreciate the psychological changes such a shift most likely demands. The most striking innovation in the symbolic systems of Africa stems from the adoption of writing. All African societies originally had their own methods for communicating over distances (e.g., drums, cowries, messengers) and over time (e.g., masks, stories, songs), but a standardized form of writing promotes accuracy and usually, too, enables nuances of meaning to be transmitted which other media may fail to communicate. A written language allows people quickly and easily to check their memories of propositions originally learned through observation, hearsay or experience, and hence it promotes scholarship, science and new forms of literature. If societies in Africa have been relatively stable before contact with the West and the East, in the present era they are acquiring the symbols which enable some of their people to absorb more of the culture of mankind and, both now and later, to contribute their own innovations and creations to the stream of change.

A critical institution in traditional African society that is slowly changing and is likely to continue to change is the aspect of family life concerned with socialization. The way of all flesh is for adults to pass on to children not only their shortcomings but also their new experiences (or at least whatever new experiences they do have affect them somehow in their role as parents). Child-rearing, furthermore, is closely associated with modern medicine: the physician, the nurse and the medical assistant from the West dispense pediatric advice along with salves and sedatives. Many African mothers nowadays are as confused as women in the West by the conflicting advice they receive concerning scheduled versus on-demand feeding. Then, in urban areas and among Africans dedicated to achieving some Western ideals,

the extended family, especially its polygynous form which is virtually universal in traditional Africa, tends to be abandoned—or modified—and eventually replaced by the nuclear family where perforce the earliest ways of satisfying the numerous, subtle needs of infants are altered. Finally, although social scientists may disagree concerning the precise validity to be accorded the Freudian or neo-Freudian contention that adult personality is markedly affected by the early years, some vital influence is always acknowledged. Whatever alterations in African socialization practices take place, consequently, must set in motion numerous if unknowable processes that will have profound repercussions upon new generations of Africans.

Patriotism

The next conceptual problem is to consider people's reaction to their country. Unquestionably, traditional Africans are patriotic, which is perhaps only asserting that they are human beings. They respond favorably to innumerable referents within their own society; they believe that they, their customs and group are distinctive and undoubtedly also superior; and they are unfavorably disposed toward certain outsiders whom they clearly can identify. This kind of patriotism is likely to be extremely meaningful to them because the compatriots with whom they identify themselves and their welfare are usually close at hand or at least very similar in background.

Political boundaries in Africa were originally drawn by Europeans not concerned with anthropological niceties; hence every modern nation on that continent is composed of more than one tribe or traditional society and generally includes a score of them. A new state, therefore, does not and cannot automatically acquire the traditional loyalty of Africans, but instead must indoctrinate and educate them through a long series of communications. It seeks therewith to associate with itself historical traditions and symbols that emphasize its uniqueness and its role in promoting the welfare of all the traditional societies within its political confines. Around the newly independent and the artificially created father- or motherland eventually must be gathered a set of emotionally demanding convictions which say, in effect, "the way of life which we treasure can be retained and promoted only by supporting and carrying out the actions that your government advocate." A long catalogue exists potentially for justifying human convictions, such as appeals to divine sanction, destiny,

justice, legality, nature, freedom, superiority, civilization, achievement, birthright, consanguinity, ethnicity, culture, need, desperation, posterity, hedonism, hate, and so forth.

In Africa it is most difficult to create this psychological groundwork for nationalism, for distinctive qualities must come to be associated with the synthetic entity of the nation, loyalty must be aroused and deep convictions must be stirred. The majority of Africans, who as a matter of fact are not "detribalized," find the new nationalistic symbols quite meaningless or at least unrelated to the personal problems pressing down upon them. They remember very vaguely the alleged origin and greatness of their land as related by their teachers (if they have gone to school and then only if the school was operated by the state rather than by missionaries), the map of the country on the wall of the government official whom they have had to consult, or the virtue of their leader or of themselves as expressed by voices on the radio. The idea of the new nation, consequently, seldom throws them into ecstasy, and they continue to think themselves primarily as tribesmen and not as nationals. For most Africans who still live in rural areas, the traditional rewards and punishments are relatively unchanged; some indefinite symbol or largely unknown leader, miles away and usually at the capital which they have seldom or never visited, simply is not convincing.

Indeed the modern media of communication themselves, necessary though they are for nationalism, are often an original source of skepticism discoverable among many Africans. In colonial times, and especially toward the end of the political struggle, Africans have been told that "freedom" or "independence" will bring them many of the benefits which accrue to a vaguely but emotionally formulated utopia; and the same media repeat the theme after self-determination has been obtained. Of course self-government does not turn out to be a panacea, and life for most Africans remains largely unchanged.

Then the well-stuffed kit of justifications for action is one few Africans are likely to possess. Traditionally they may feel devoted and dedicated to their society without being able to verbalize what they feel. Modern nationalism, however, demands the ability to transfer such feelings from a narrow to a broad sphere of activities. As Africans become nationalistic, therefore, they learn not only to express themselves more readily but also to use verbal expressions to link their own unreduced drives and ambitions to the actions of the state.

When the shift from tribalism to nationalism in Africa does occur,

however, an intense patriotism regarding the new nation can be anticipated. For people learn to be patriotic regarding some geographical unit and, if they are first extremely loyal to and enthusiastic about smaller units (beginning with the family and the neighborhood and, in Africa, extending to the region and the tribe), eventually they are likely to display the same syndrome with reference to the larger unit. The learning here is facilitated by the presence of a villain, usually the European but sometimes also the Asian or the Middle Easterner, who can serve the functions of accounting for evil in the past and justifying the nationalistic measures of the present and the future.

The same villain, real or imaginary, plays a similar role when nationalism is facilitated by extra-national appeals, such as those to Pan-Africanism and Pan-Islamism. One loves one's land more and one is willing to make greater sacrifices when those evoking sympathy and interest are being helped or united against a common enemy. Africans outside the borders of the nominal nation are equally familiar or strange with respect to customs and skin color as those within. And Africans who are Moslems can feel a deeper affinity with fellow Moslems thousands of miles away than they can with Christians or "pagans" inside their own country.

Leaders and followers

The final analytic task is to appraise shifts from tribalism to nationalism in terms of the political structure of a country. The people of all African societies are moving toward the West at varying rates. Even isolated tribes like the Bushmen and Pygmies contain people who have had considerable contact with Western traders and missionaries and who may even have some knowledge of a European language. Since all of Africa except Liberia and Ethiopia has experienced colonial rule and since those two countries have had a ruling élite oriented toward Europe, steady pressure to accept certain traits from the West has been exerted for decades or centuries upon a small group of Africans within each society whose services the rulers from outside or inside have considered essential. Aside from servants and workers, traditional leaders have been utilized or new leaders have been created so that the colonial administrators or the top clique could function smoothly and remain in power. In addition, some leaders in the new African countries, originally attracted by particular features of Western society, received their formal education either in the West

or in Western-type institutions in Africa. In any case, all the leaders of present-day nationalism in Africa are Africans who are highly acculturated; traditional chiefs and others who remain unacquainted with the West are neither equipped nor eager to become nationalistic in the modern sense.

These Westernized leaders comprehend modern nationalism and are trying to push their peoples away from tribalism. It is they who, following Western models, re-create within their own countries the social, political and economic institutions of the West and who also slowly evolve the communications which provide the symbols of nationalism and the justifications therefore. Much of African nationalism, consequently, is really the nationalism of a small group of leaders and not of the mass of followers.

With few exceptions, the new leaders feel within themselves innumerable conflicts which spring in large part from the positions they occupy. In front of Westerners they must display both the sophistication and sagacity which they associate with the West. They would convince their former European teachers or classmates that they themselves and also their countries are similar to the rest of the world: they are progressing in the way the West is supposed to progress, they have power in the Western sense, or they can compete successfully, as they do at the United Nations, in the struggle for prestige. At the same time, many, perhaps most African leaders feel ambivalent toward the very Europeans they would impress, inasmuch as in the past they have experienced discrimination or disparagement by "colonialists." They must talk big and act quickly to demonstrate to these outsiders that they have come of age and no doubt, to quell their own uncertainties. Since nationalism in the West is associated with a distinctive history and a distinctive set of customs, for example, they must acquire or deliberately manufacture a past and traditions for the nation as a whole. Or since leaders in the West have achieved historical immortality by uniting peoples who had previously been separated and since great messiahs there have appeared when political or religious conditions were propitious, the most ambitious of the African leaders seek to transcend their own boundaries in order to push all Africans, all men of color or all fellow Moslems toward federation or unification.

African leaders probably know there is a cultural discrepancy between themselves and their supporters, but they are unsure what its magnitude is or should be. The distance cannot be too great, for

the mass of Africans is likely to be more devoted to traditional ways than to the idea of becoming Westerners. In addition, as suggested above, Africans resent overly vigorous efforts to lure them away from their own tribes in the interest of national unity. The distance cannot be negligible since some Africans want their own leaders to demonstrate an ability to exercise Western skills more effectively, or at least as effectively as Westerners. The leaders, moreover, feel African impulses within themselves: they are proud of their own traditions and of their membership in a particular society. From their knowledge of the West, consequently, they appreciate the need for certain drastic changes if the new nation is to be viable and to function independently alongside older nations, but from their knowledge of Africa they realize that they cannot introduce changes too quickly. Also they are saddened somewhat as they realize that they themselves are helping to change the traditional life which they now think they enjoyed as children.

Painful decisions must be made at every turn. A campaign is started to have women in a "backward" area fully clothe themselves. African officials privately may admit that semi-nakedness or stark nakedness is not sinful, but they also think that photographs displaying such "primitive" customs in Western magazines or on Western motion-picture screens is bad public relations and detracts, for example, from the prestige of their delegate in New York when he supports a motion of the African coalition before the United Nations. Should an African leader marry a second wife? Should he live in a Western style house? When he appears in public or especially when he travels abroad, should he wear traditional or Western clothes?

African leaders are generally aware of such conflicts within themselves as well as conflicts between themselves and both their followers and Westerners. When they hear complaints that African leaders nowadays often tend to be arrogant toward other Africans and toward most Westerners, they are ready to provide glib replies; their followers now require strong, firm guidance, they say, for otherwise they move too slowly and are engulfed by internal disorder and economic distress. And Westerners, they add, are reaping the harvest of their colonial past; it is good to be able to strut when previously you have had to squat.

African leaders, finally, express both a hope and a fact when they assert that they are creating a unique form of nationalism. Each country now possesses, within its own artificially established bound-

aries, a variety of distinctive cultures, all traces of which will not quickly disappear. First leaders and then followers gradually learn the skills needed to carry on a political economy in an interdependent, tense world, which means in practice that both groups reluctantly abandon many but not all aspects of tribalism. Leaders very eagerly provide, but followers only slowly acquire the symbolic paraphernalia of modern nationalism. The economies, the ideologies, the symbols, the convictions and the justifications of African nations, in short, eventually resemble those prevalent in the West, but they are interwoven with African elements. For better or worse, a mighty psychological revolution is taking place in Africa and other lands, and it is a revolution that is simultaneously violent and gentle.

8-2. Toward a national science policy

"The problem of implanting and cultivating the scientific disposition in the new states is more difficult than it was in the more advanced ones."

EDWARD SHILS

Science has, in the eyes of many of the emerging nations, become the new magic, the elixir that is to enable them to leap centuries and achieve modernity overnight. The arts and humanities may be overlooked or even scorned in the drive for development, but not science—that is, if merely talking about scientific development could produce it. Here, indeed, is new magic for old. Translating such high hopes and unbridled faith into the requirements of a realistic national science policy, directed equally by the needs of national development and the requirements of science itself, is the task Edward Shils has set himself in the following selection.

The challenge of scientific development to new nations is the more difficult to meet in his judgment because its externals—organization, equipment, financial

support, and trained persons—will still be of little avail if it lacks the central ingredient—the real magic of science—the disposition of disciplined curiosity and sensitivity. One may agree with Shils that this sensitivity and devotion to inquiry is in part the product of a free interchange with the world-wide community of scholars, but the foundations for disciplined curiosity undoubtedly must be established at an earlier stage—in an education that supports it. Science is more than taxonomy, repetition, and a body of accumulated facts. It is a way of exploring and verifying purported truth. Such a discipline and such an inclination are not to be produced merely by introducing courses labeled “Science” into the schools but by assuring that the quality of whatever courses exist or are introduced is such as to nurture the growth of the scientific spirit. Once schools and teachers have done this, they shall indeed have substituted new magic for old, and the real leap to modernity will have been brought into the realm of the possible.

[Edward Shils]

The leaders of the new states of Africa and Asia are not scientists. Dr. Chaim Weizmann was unique in the association of high scientific distinction with political eminence, but he had long since ceased his scientific activity by the time he became President of Israel. Few of the leaders have ever studied science as a special subject at the university. Mr. Nehru is one of the very few; and although he has retained a great appreciation of science, and of the “scientific outlook,” he has never been a practicing scientist. The scientific orientation of their two most distinguished statesmen must have some responsibility for the relatively elaborate provision for science in Israel and India.

The situation of most of the other new states is quite different. The professional political elites of the new states have come from a variety

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of backgrounds: from law, from school teaching, from journalism, from medicine, from the lower levels of civil and private administration, occasionally from small business—but mainly from the peripheries of the intellectual professions. The military leaders who rule with some measure of stable authority in at least five of the new states have had the usual technical, very elementary, scientific training of the military man of the period between the two World Wars; they are certainly not scientists, and, at best, they have an intelligent appreciation of the problems of civil engineering, and a little chemistry.

Yet, although so few of them have a scientific education or experience, most of them speak with great appreciation of science. There are various reasons for this. Science is today part of the regalia of national greatness; it is linked, in popular opinion, with a complex technology, and hence ostensibly with economic progress. The image of a great state today includes advanced scientific training and scientific prowess. Sputniks and Nobel prizes have taken the place of battle cruisers, and rank with the figures of steel and electricity output as measures of greatness. For the few who are Marxists in formation and sympathy, a belief in the fertility of science comes readily, because they vaguely equate Marxism and science, and thus envisage science at large as an instrument for the transformation of society.

There are other, better reasons for their concern with science. Sober politicians and civil servants recognize that economic development requires many persons who have had a technological education, and some who are capable of doing research which falls somewhere between technology and science. They know that their own natural resources—soil, water, minerals, and plants—will not be improved, increased, and exploited without technological education and research. In many of the new states, the administration has inherited a variety of scientific services from the colonial regime—and, in some cases, their personnel as well. Such persons, expatriate or indigenous, are a continuing reminder of the necessity of science in the conduct of a modern polity. Moreover, where the new state has inherited or newly established a university or any other institution of higher studies, it has simultaneously created a voice, on behalf of science, for scientific education, for technology, and for technological education.

Of the new states, only Israel and India have established science on a large scale. Pakistan has had a commission report on the situation and needs of science, and a strenuous effort will undoubtedly be made to give reality to its recommendations. Nigeria, through the Ashby

Report, has now taken a deliberate position on the development of scientific and technological research and training. In the other new states, science is still to be seriously considered. Sooner or later, the political, educational, and administrative elites will have to pay more than ritual respect to the task of promulgating a policy for the furtherance of research and training in science and technology. In the following pages, I shall attempt to illustrate some of the most general problems with which they will have to deal.

The necessity is pressing. Economic development requires the prospecting and appraisal of resources. Soil, minerals, marine and animal life, vegetation, water resources, rainfall, insects, plant and animal diseases, manpower, public health, etc.—in all these matters, a country which aspires to economic development must know where it stands, what it can count on, and what it must reckon with. It is the first task of almost every new state to organize its survey machinery and to staff it with competent persons.

This does not require original research of a fundamental character. The techniques have already been formed in the advanced states, and most of the colonial powers and their business adjuncts had made some progress in the conduct of geological, zoological, entomological, hydrological, and other types of surveys. The pattern of organization is well established, the skills required are fairly well defined, and the techniques are available. What is lacking in many of the new states is manpower.

Another type of research is needed in the new states—one which seeks to discover not some fundamental scientific law, but a mode of adapting to new circumstances an industrial or agricultural process already known and used in other countries. This type of “adaptive research” is directed toward the application of already existing technological knowledge to the climatic, geological, chemical peculiarities of the local situation or the local product. Such research does not require great genius on the scale which would win a Nobel Prize, but it does need a scientific discipline and disposition. It is the promotion of this kind of research which, in the near future, should be one of the main concerns of the ruling bodies of the new states.

Fundamental scientific research on any considerable scale need not be placed very high on the immediate agenda of the new states. It is often costly and, to be worth doing, it must be very well done, with an aptitude and sensibility which are probably still too rare in the new states. The scarcity of capital in relation to the most insistent

needs of economic and social development almost forbids any fundamental research which requires expensive equipment or considerable numbers of expensively trained persons.

Nonetheless, even if this fundamental research is, for the time being, dispensed with, technological research—relatively humdrum as it might seem in comparison with the grandeur of investigations into the nature of life and the universe—requires an elaborate and expensive substructure. It requires a corps of investigators, trained either in indigenous institutions or abroad, and supplemented by a corps of skilled tradesmen or artisans, who could maintain or repair complicated machinery and instruments, and devise and make simple ones. . . . The creation of such a corps in the new states cannot wait for an industrial revolution. Some organized effort will be needed; and, as in the provision of equipment and facilities for training of research technologists, government action is indispensable.

In a different direction, technological research requires education in science at the elementary and secondary school levels. Apart from these technicians, who need no more than secondary education, the potential research technologists who will go on to advanced training at the college or university level require a better secondary-school education in science than is now available. This touches on the training of science teachers for high schools, on the planning of secondary-school courses in science, and on the providing of equipment and laboratory facilities. Once more, it is difficult to imagine serious progress in technological research for economic progress without a comprehensive policy for scientific education at the secondary level and vigorous and persistent action on the basis of that policy.

The conduct of research in technology and science in the new states is thus almost inevitably an object on which governmental policy will play a most significant role. . . .

Each government in the new states must decide how much of its total budget to allocate to science and technology; among what alternative uses in science and technology to allocate it; what institutional arrangements it should use to expend the funds so allocated; and, finally, what types of institutions it should attempt to create and promote. More fundamentally, it is a question of how government aid to research and training can best foster creativity, inventiveness, and adaptiveness. These virtues will be necessary—regardless of whether the government or the body which acts on its behalf decides to support pure science or applied science and technology, of whether it con-

centrates all its resources on technological training or divides them with training in pure science, of whether it creates advanced training institutions at home or sends its good young scientists and technologists abroad for advanced training. Each of these alternatives can be justified by reasonable arguments, and they are not, in any case, mutually exclusive or exhaustive.

Whatever the combination of alternatives chosen, the choice should be made deliberately, with the ends of economic and social development in view. This is not, however, always the situation in many of the new states. Decisions which are being made on expenditures in scientific and technological research and training are often impelled by considerations of the enhancement of national prestige (e.g., the atomic energy programs of a number of the new states), by pressure from academic bodies which wish to continue to do research of the sort which their members did during their studies overseas, by the accidents of competitive gifts of equipment from the Soviet Union or the United States, and by other factors which should not be given free play.

Of course, it is difficult, if not impossible, for a government—or for any central body—to plan scientific and technological research. It is practically impossible to plan fundamental research from a central position. A Council of Scientific and Industrial Research can, at best, provide funds and equipment for outstanding, able men, and hope for the best. It is, however, possible to plan or to establish a set of *priorities* for technological research. . . .

Such a policy could be concerned with the domestic training of some of the various types of personnel required and the foreign training of others, for whom domestic training would be excessively uneconomical. Enumerating the foreseeably needed research into technological problems of local agriculture and industry would provide the basis for estimates of costs, of the amount of foreign exchange needed for equipment, of the number of research workers to be trained over the period concerned, of the number of skilled artisans required, of the number of science teachers required if the secondary schools are to produce a reservoir of potential technologists and technological research workers, and so on. The plan could never be precise, but it would be better than random movements, impelled by considerations such as prestige and momentary enthusiasm.

Another problem for a government which takes seriously the re-

search requirements for economic development is that of organization. How much of the needed research activity should be carried on in universities, university colleges and technical colleges; how much of it should be carried on in government departments; and how much of it should be carried on in relatively autonomous laboratories and research stations? What should be the principles governing this division of labor? How can the optimum liaison between agricultural extension and agricultural research be best established—by amalgamating them into unified institutions, or otherwise? How should industry and industrial research be best articulated? One could go on multiplying this list of problems which should be considered in the promulgation of a policy of scientific development. Once again, it should be said that a policy cannot be expected to supply a stable and utterly reliable set of rules. It can make the decision-makers more circumspect, and more aware of the ramifications of the problems, than they might otherwise be.

Even if there were a judicious choice of those problems which are most important for economic progress and most amenable to economic solution; even if the right numbers of qualified scientists were produced by the most economical methods; and even if the right amounts of money were spent on buildings, equipment, and salaries—there would still be no end to the problems of scientific policy. It is not just a matter of equipment, buildings, the right selection of problems, and the right training. It is also a matter of motivation, of tradition, and of a propitious atmosphere within the research establishment.

The extension and elaboration of this scientific tradition, of the body of inherited scientific knowledge, are, in the last analysis, a product of the scientific disposition of disciplined curiosity and sensitivity. Organization, equipment, financial support, and large numbers of persons are only instruments for the operations of this scientific disposition. It really does not make any difference whether the new states eschew pure research for the time being and concentrate their efforts on applied research. The successful prosecution of applied research is almost as dependent on the scientific disposition as is pure research. It is, therefore, essential for those who administer and promote scientific research for economic development, for the improvement of human welfare, to remember that the vital center of the disposition is formed by immersion into the tradition of creative scientific work.

Hence, in their recruitment policies, in training of those recruited, and in the employment of those trained, administrators of science—whether they be politicians, civil servants, or former scientists—must remember that curiosity, sensitivity, and selfless devotion are as important as formally articulated rules and techniques. The decisions to establish new training centers or new departments in existing centers, or to send young men to foreign centers for training, must therefore take into account the fact that their task is the cultivation of the scientific disposition and the provision of an environment which will favor its operation. The organization of laboratories and of teaching departments, and the system of placing graduates returned from foreign training, will have to make provisions to avoid the frustration of this scientific disposition by the dead hand of a desiccated and embittered older generation or by an unsympathetic and nonunderstanding bureaucracy.

The problem of implanting and cultivating the scientific disposition in the new states is more difficult than it was in the more advanced ones, where it has existed for a long time. In the latter, it arose before the introduction of the methods of the forcing house; and, in a sense, its capacities for self-reproduction through training in research in universities and independent institutions enable it to take care of itself. In the new states, there is not this capital of scientific tradition to draw on. It has to be built almost from scratch, from a very few persons. These few persons will have to serve as cadres for training others, for training those who will train others—and, above all, for maintaining and representing, by embodiment, a standard of curiosity, inventiveness, and sensitivity which will be a model and a tonic for others. They must not only keep others alive scientifically, they must also keep themselves alive scientifically, lest—under difficult circumstances of overwork, overadministration, and lack of sympathy from administrators and politicians—they relapse into the enjoyment of their importance and lose the scientific touch. To retain this touch and to transmit it to the embryonic scientific community of their own countries, they must retain their active membership in the amorphous, almost boundariless fellowship of the international scientific community.

If they lose that membership—by doing nothing considerable, or because of the distraction of petty local affairs, or because national pride forbids its cultivation—they will fade away into a dusty provinciality. It will be the end of their scientific fertility and they will

lose the virtues they would otherwise possess for the oncoming generation. The whole scientific enterprise of the state in which this happens will sink into a bog.

8-3. Forming a scientific culture

"What are the potentialities of creating a new cultural synthesis?"

DAVID E. APTER

The easy equation of economic development with technology, and of technology with science, has thus far afforded science (in contrast to the humanities) the privileged place on the agenda of new nations. Although one may speculate on the long-range social, political, or moral benefits of an indigenous tradition in the humanities, its growth has almost universally seemed less urgent to practical-minded politicians who make decisions in the emerging nations. Enamored of the scientific face of Western culture, they find the prospect of modernization without a heavy emphasis on science unthinkable.

In the following selection David Apter, a social scientist, discusses the unfortunate cleavage between the literary tradition and the scientific tradition in the Western world, and he asks if this same cleavage will exist to mar the civilizations of the emerging nations. His fascinating answer, which is in a sense both a social history of development and a speculative theory of "civilization-building," is a most suitable culmination for a chapter on cultural and scientific development in the new states. With him we may well ask, "When a whole group of nations are animated by a common desire for achievement, who is to deny them Utopia?"

[David E. Apter]

When C. P. Snow first published his Rede Lectures on the two cultures, the literary and the scientific, and decried the tragic effects of their separation, the effect was electrifying. By describing the manifest inability of the literary intellectuals to apprehend the world of science, he was attacking the high culture of the Western world at its roots. The culture of science is based upon its optimism, and its ability to control and transform man's environment, which in turn derives from the profound achievements in science and technology which have been the astonishing consequence of the last hundred years in the West. In contrast, the literary intellectuals see man's condition as tragic, his nature unalterable, and his potentialities and creative gifts damaged by a quixotic perversity.

Today's scientists have little patience with this view. As Snow puts it, scientists "would see no reason why, just because the individual condition is tragic, so must the social condition be." He recognizes that the scientific intellectuals are viewed as a threat by the literary representatives of traditional culture—even the esthetic and artistic traditions which each has come to represent are antagonistic to one another, or worse, mutually ignored. This divergence of the two cultures must end. Science, Snow argues, must be "assimilated along with, and as part and parcel of, the whole of our experience, and used as naturally as the rest." . . .

The fact that this dualism of culture is by no means restricted to the West makes Snow's problem more than a literary exercise. A similar phenomenon is present in all high cultures. The reason is that science confronts high cultures with a peculiar paradox. The culture of science is geared to technological innovation. The efforts of high culture to absorb the social and moral consequences of technology arouse some hostility in the scientists. The products of science are its justification. The practical and moral puzzles left in its wake are insoluble by scientific means alone. Perhaps the only exception

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to this rule, and it is a notable one, has been the efforts of Marxism to create a harmony between philosophy and science, producing a new social architecture in which the useful products of science, i.e., technology, create the "correct" social condition for men, and the only ultimate moral puzzles derive from traditionalism—the traditionalism of high culture itself.

High culture vs. science in the new nations

* For the areas now becoming independent of colonial rule, the relationship between science and society is much closer to the Marxist position than any other. The leaders of new nations share an urgent and understandable desire to make a gigantic leap across time, to bypass slower and more "natural" processes of economic and scientific growth and place science at the service of an immediate technology—a technology of improved agriculture, of industrial expansion, of health and sanitation, and of startling new methods in education and training. More generally, they want to create the social and intellectual bases of healthy modern societies by political means. Romantic as the dignity and wisdom of traditional societies may appear, they cannot disguise the losses in talent and wasted opportunity, and the effects of prolonged human suffering, which virtually every village community in Africa and Asia still harbors. . . . They can, as a result, successfully combine relevant portions of the two cultures in their political ideologies and put forward their social views in the name of science. Much less successful in this are the new universities of Africa which are as badly divided on the issue of the two cultures as their metropolitan counterparts. Founded during the last stages of colonial rule they are exotic hothouse plants, modeled after the Universities of Paris or Cambridge or Oxford, with all the real and fancied privilege and protocol awarded to the student in Europe and England. They are outposts of Western traditionalism, designed to carry on the culture of literary intellectuals first, and only then the more pragmatic sciences, pure or applied. It is no wonder that they remain centers of political opposition, antagonistic to the effects of social engineering and contemptuous of science, and of the politicians whose friendship they do not want.

These problems have been the frustrating concern of all those interested in higher education in such countries as Dakar, Ghana, and

Nigeria. Concerned with the tragedy of the individual man's fate, the intellectuals are at war with the social engineers who are concerned with manipulating the social environment. Their outlook is more determined by problems of a material nature. For, as Noel Drogat has remarked, "We live in a world of prodigious inequalities where one-tenth of the population of the globe disposes of 80 per cent of the total wealth." Under such circumstances, the concerns of the intellectuals appear to be an ill-afforded luxury.

Can the liberal tradition which the literary intellectuals represent expect to survive? Snow's answer is unequivocal: "Plenty of Europeans, from St. Francis Xavier to Schweitzer, have devoted their lives to Asians and Africans, nobly but paternally. These are not the Europeans whom Asians and Africans are going to welcome now. They want men who will muck in as colleagues, who will pass on what they know, do an honest technical job, and get out. Fortunately, this is an attitude which comes easily to scientists."

Choice or synthesis?

We see then that the high culture of tradition and individualism is posed against the cultural comraderie of social engineering in the developing areas of the world. High cultures always oppose rationalistic egalitarianism; it is those who have absorbed high culture, either at home or abroad, who shrink from the full consequences of social change. The conflict mirrors the antithetical aims of preserving individual liberty and values and the complete and rational overhauling of institutions. . . .

But, do new nations need to make a choice in this respect? Do they need to opt for one culture or the other to ensure success for their cherished ambitions? Not only does it appear that such a choice is unnecessary, but it is precisely in those countries where a traditional high culture is not indigenous, but has been developed through association with the Western world, that the opportunity for a new kind of synthesis, neither Marxian (although it may well be socialist), nor purely Western, presents itself.

If the high culture of the West, which has produced both the moral-intuitive literary tradition as well as the scientific, has failed to absorb the latter's products, then societies which have not had high cultures should find it easier to accept the culture of science than that of any other. . . .

Not only is tradition more easily shaped to the needs of science where no high culture has prevailed, but the culture of science is also modified. In new countries, immediate service to the community is the sole object of science. What it offers is practical rather than pure. As a result, it is not those who represent the scientific culture who find a place in the new nations, but rather the men who Snow regards as falling away from that tradition in its philosophical sense, i.e., the engineers and the technicians. These practical men set the goals in most new nations, along with the social engineers—the politicians.

Isolation of intellectuals

What then are the potentialities for creating a new cultural synthesis, where practical men set the standards of life? Can the job of building new societies, which are necessarily moral communities, lead to the creation of a new civilization? . . .

Snow is right, however, in his realization that it is the scientific culture which is acceptable, while that of the literary intellectuals is troublesome. The scientific culture enters not through the men of science but through its practitioners. They may not be good representatives of the scientific culture, but they possess what the more abstract literary and scientific people lack—a meaningful place in the political life of the new nations. This is a very important fact, and it is on this slender wedge that my subsequent arguments rest. I shall try to indicate that out of the functional needs of those developing nations which have not had indigenous high cultures it is possible to consider the emergence of a new civilization—a new high culture incorporating both the literary and the scientific traditions.

A new high culture

I say this even though all present evidence points to the contrary. Surely, it can be argued, the result of collaboration between technicians and politicians can only be disaster. It will mean rule by the barbarians. Politicians who presume to engineer society are necessarily so vain that they will become hostages to their own fortune, following blindly upon the consequences of “practical” delusions, so that in the attempt to build, they destroy those few remnants of science and morality which remain.

Such possibilities are, of course, very real and one cannot deny their significance. But such dangers are always present at the beginning of a process of major change. Whether such a grisly fortune develops depends a good deal on the architects of social progress themselves, and on whether they can achieve some of their basic objectives. The problem can more usefully be seen in developmental terms. There are stages in the process of "civilization-building," and they are directly connected to the stages of nation-building and economic growth.

First, a social minimum must be achieved. Both the technicians and the social engineers play an important role in this preliminary stage. It is impossible to build a new civilization and achieve such a social minimum simultaneously. Indeed, the recognition of this has given Marxism a great advantage as an ideology for underdeveloped areas of the world.

Second, as the social minimum is approached, as a result of external assistance and internal development, it becomes possible to consider a scientific leap—a revolution in technique and technology which can by-pass many of the stages of growth which have been characteristic of the West as well as the USSR. Without such a scientific by-pass, the developing areas will continue to find themselves further and further behind the West and the USSR. Only if the most advanced technology is utilized and applied—a technology which minimizes the need for a large and highly skilled manpower and requires instead a small but exceptionally educated scientific elite—can material and social progress be realistically envisaged.

I would argue that although the technicians and the social engineers must ensure the development of a social minimum, it must be the scientists who bring about a scientific by-pass. By addressing themselves to this problem they can create for themselves a robust and significant role in the new societies. The scientists must also begin to concern themselves with matters such as the social consequences of a scientific revolution, a concern which hitherto has been confined to the literary intellectuals. When the scientists become concerned with utopia, a new civilization becomes possible.

Such utopianism is entirely appropriate to those new nations whose task it must be to create a new society with a new technology. The culture of science must enlarge its tradition. To do so, it requires the assistance of the literary intellectual tradition. Through its own success, the scientific culture creates the need for a humanistic culture. . . .

Conclusion

I have argued that the concerns of the literary intellectuals and the men of science are necessarily in conflict with one another wherever high cultures are involved. My suggestion is that in the new countries of the world where high cultures do not exist, and where the knowledge of science and the knowledge of social morality have both been derived from Western roots, there is a chance for a new scientific culture to develop which integrates both the scientific and literary positions. . . . Opportunities for science develop out of the need of the politicians and the expertise of the technicians. But the technicians cannot, themselves, create such a revolution. The scientist is required for that. Once the scientific revolution begins, it stabilizes the role of scientists, and by this means the culture of science. After that, it is the scientists who must call on the literary intellectuals and find for them a constructive and positive role. Only the latter can provide the leavening of a new civilization, for they must conceptualize it, give it meaning, breathe life into its lungs, and make it reflect on its shortcomings. When science creates a role for the literary intellectuals in a dynamic, new context, the prospects of a scientific humanism will prosper. Snow has argued that the West cannot achieve this, that it cannot find any "political techniques through which the good human capabilities of the West can get into action." He may be correct. Ours is a strange paralysis. But what cannot be done at home may be done abroad—when a whole group of nations are animated by a common desire for achievement, who is to deny them utopia?

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chapter 9

Education for Whole Nations

9-1. Education for self-renewal

"Education which does not take into account the cultural realities will either stand helpless or do positive harm."

COLE S. BREMBECK

The selections in chapter 8 made clear some of the requisites for cultural and scientific development, the challenges and disruptions that are involved, and the modern abilities that must finally become traditional man. At no time was it suggested that the process of cultural and scientific development could be halted, deflected, or turned back. It may stumble, even flounder, but there is no turning back.

If this is true, there falls upon the agencies of development a unique kind of responsibility toward that change: to give it balance, content, and direction. If the agencies of development take seriously this responsibility, then, on the one hand, the disruptive effects of change can be muted and, on the other, the constructive goals of change can be brought nearer.

What is the role of education in this process? In this chapter we shall see that education plays various parts in cultural and scientific development. It may add to the disruption that frequently attends social change. It may look solely backward and resist the changes

taking place around it, or it can equip itself to perform the most difficult task of helping to preserve and transmit those values of the culture that are regarded as culturally useful, while at the same time putting new leaven in the cultural loaf to improve its quality.

In the selection that follows, Cole S. Brembeck considers the qualities that mark the kind of education attempting to give balance, content, and direction to cultural and scientific development.

[*Cole S. Brembeck*]

When I first went to Pakistan a few years ago, I began to realize the value of looking at education in cross-cultural perspective. Since that first trip, I have had the privilege of living and working there on other occasions, and each time I returned home with a little clearer understanding of American education. Conversely, my American roots have helped me to gain a better appreciation of education in Pakistan, its progress, and its great promise.

Our two cultures are vastly different, each with its own unique traditions and experience, and our respective educational enterprises will flourish as we learn to build upon the best within our own cultural experience. Educational systems must be congenial to the cultural soil from which they spring. They cannot be exported or imported, like rice or wheat.

Yet, educational systems have many tasks in common. Today I wish to discuss with you one of those tasks of the educational process that is an integral part of education everywhere in the modern world. I refer to the function of education as an agent of social change. There is no educational function more common to our two countries. Nor more important. Great human and natural resources are being invested in education as a means of achieving desirable social and national goals. The modern world has almost limitless faith in the power of education to change things.

What do we mean when we speak of education as an agent of change? When societies were simple and traditional, education could

Cole S. Brembeck, "Education and Social Change," read before the 14th Annual All Pakistan Science Conference, University of Peshawar, March 1962, pp. 1-9. (Mimeographed.)

concern its whole self with the past. It could afford the luxury of doing nothing but looking back. But traditional societies are vanishing, and new social systems are emerging under the impact of science, technology, and industrialization. We sense that the old education is inadequate for these times, but we are less sure about what new education should replace the old.

It is my position in this paper that modern education has a most difficult dual role to play: that of preserving the good roots of the culture, while planting new seeds that have the capacity to bear rich fruit in a rapidly changing society. Such an operation calls for both skill and patience. Progress is understandably slow.

But the commitment to education as an agent of social change is everywhere apparent. Never have we expected so much of education. Will our expectations be realized? Or will they be frustrated?

Much, I think, depends upon our understanding of education as an agent of change and our ability to use it well. In terms of our long human history man is a novice at using education consciously and formally to better his life. Schools as places and institutions are relatively new on the human scene. And, for the most part, they have been used not to bring change but to block it. Man, however, is not a novice at using education informally to perpetuate his culture, to extend his traditions, to pass along his own ways to his children. His record is quite good: He has survived, both biologically and culturally. But our experience in using institutions of learning as conscious tools of human betterment is not dignified by long tradition. We are, therefore, in a position of having to learn together as we go along.

The first thing I think we need is a full appreciation of the modern cultural scene in which education is called upon to perform as an agent of change. I said a moment ago that traditional societies are vanishing and that modern societies are undergoing great transformation under the impact of modern science, technology, and industrialization. With these forces have come urbanization and its attendant problems. One result is that the individual person in this new mass society is in a sense "depersonalized" and "deculturalized." People lose their roots in the modern sweep of things. Family and village structures change. People travel to strange places and they try to assimilate new ways, sometimes successfully, sometimes not. Literate sons become strangers to their illiterate mothers, and children learn ways unknown to their parents.

This process of social change, which I have described, is not strange to you. You see it taking place here, although, I am sure, in different ways. Because it is so all pervasive, it has been the concern of some of our best minds. If I understand the work of Gandhi correctly, this is exactly the tide that saintly man wanted to stem. His emphasis upon the integrity of the village, cottage industries and basic education was designed to redirect the modernizing river away from the cities and mass culture and into less disruptive channels. But even Gandhi may have underestimated the size of the great force with which he was battling. I was speaking only recently with a friend about Gandhi's view of the village. He knew the Mahatma and had worked with him. His remark is appropriate here. "Gandhi was a great man," he said, "but even he could not turn back the future." Still, I think Gandhi's social burden was correct. He was concerned about the wholeness of people's lives and the wholeness of the communities in which they lived. He saw that the sweep of modern industrialization takes a heavy human toll. And he valued people above machines.

What does all this have to do with education? I think it has a great deal to do with it. That education that does not take fully into account the cultural realities of the lives of the people will either stand helpless and empty-handed, or it will do positive harm. Education must be deeply concerned with culture.

It must recognize the nature of the society in which people stand rootless between the "old" and the "new." It must prepare them to live with change. More importantly, it must prepare them to control change, direct it into constructive channels, and use it for human betterment.

What is such education like? I propose now to attempt to set forth some hypotheses regarding education that seeks to change human development and behavior: (1) It relates itself meaningfully to the realities of the culture. (2) Teachers must know and extend the content of their culture. (3) Its method is analysis rather than rote memorization. (4) Education for change is ultimately education for all. Now I would like briefly to examine each of these hypotheses.

1. Education for change relates itself meaningfully to the realities of the culture.

Education for change involves certain social risks. Like technological change, education for change may isolate people from their own

culture and cut them off from its energizing reality. Modern education everywhere runs the risk of making students strangers among their own people. Somehow, education for change must teach people to perform the most difficult task of standing with one foot in the past, the other in the future, and still feel comfortable in the precarious present. It must, in a sense, make them "bicultured," rather than "decultured." Education can do this only if it is tied squarely to the contemporary realities of culture and is prepared to teach people to deal with them.

Learning takes place best when it is vitally connected with the culture. When social disruptions make these connections difficult, learning is severely handicapped. Educators in Pakistan are in a better position than most to understand the full impact of social disruptions upon education. The great dislocation of the partition uprooted the people, cut them off from their kin in villages and cities, drove them to strange parts, and disrupted their total way of life. Deep gulfs were created between each individual and his past, between parents and children, and between people and their environment.

For the children of parents so uprooted, it is not enough to take snatches of their cultural heritage and attach it to their new learning. Rather, the curriculum must be so designed that it helps children to achieve a new personal integration and a sense of belonging, which one must have before he can learn anything at all. The whole sweep of modern education from Froebel and Madam Montessori to John Dewey may be seen as an attempt to recreate within the school a closeness and relevance to the real world outside, and to see this world through coherent cultural symbols so frequently lacking in our modern society. Education for change reaffirms the vital relationship between education and culture.

2. Education for change requires teachers who know and extend the content of their culture.

One of the human consequences of modern life, we said, is that people are isolated from it, strangers in their own culture. Certainly teachers are subject to the same cultural dislocations as everyone else. But, with teachers, the fact has greater social consequences. By their examples they can increase the disruption. Or they can put the pieces together into meaningful wholes for their students. Which they do depends upon where they stand in relation to the culture. If they

stand outside it, they cannot feel fully involved in it, nor any responsibility toward it. In such cases they can but irritate the problem. On the other hand, if they have a deep appreciation of the culture, a fine sensitivity to it, their students can see in them symbols of what the culture can and should be.

But teachers must know more than the content of the culture. They must know how to expand that content and set new directions for its development. In that sense, they must be "misfits." Those who feel deeply akin to their own culture provide the glue to give it cohesion, but the "misfits" work out in pain and sometimes rebellion, new forms and programs to give shape to the future. We need both kinds of teachers if change is to take place. Cultural transformation is marked by people who look in different directions. Some look back. Some are concerned only with the present. Others, "the misfits," have their eyes fixed on the future. A dynamic culture needs all three, if it is to have both cohesion and movement. Cohesion alone is both undesirable and impossible in our time. Movement alone is both possible and dangerous. We must have within our cultures forces that make for both. Perhaps this is the unique goal of education in a changing culture. If education is to perform this goal, the teacher must be closely identified with his culture, know its content well, and then be prepared to give both shape and direction to its future.

3. Education for change uses methods of analysis rather than rote memorization.

We said that the sweep of modern education may be seen as an attempt to recreate within the schools a program of vital relevance to what occurs outside the school. You will recall, I am sure, the philosophy that Tagore brought to the founding of his school at Santeniketan. Tagore wanted his school to relate itself to the life of the villages and the fields around it. To use his words:

"Our center of culture should not only be the center of the intellectual life of India but the center of our economic life also. It must cooperate with the villages around it, cultivate land, breed cattle, spin clothes, prepare oil from oil seeds; it must produce all the necessities, devising the best means, using the best materials, and calling science to its aid. Its very existence should depend upon the success of its industrial activities carried out on a cooperative principle, which will unite the teachers and the villagers of the neighborhood in a living and acting bond of necessity."

I know of no more compelling statement on education as an agent of social change. It is an illuminating personal declaration of philosophy by a great poet. But it is more than philosophy. It makes clear what must happen inside a school that intends to make a difference in the life of the people. It is a statement on methods of education for change.

Tagore says that there should be a vital relationship between the school and the larger community around it. He strongly suggests there can be no vital relationship at all unless the school takes seriously its responsibility to do certain things. What are those things? To use Tagore's words, they are to devise "the best means," use "the best materials," and call "science to its aid."

Devising the best means and using the best materials obviously calls for a scientific approach to the methods of teaching. It calls for putting students into a questioning frame of mind, giving them the tools of analysis, teaching them to find answers. Instead of teaching the textbook, it teaches students how to solve problems, in which effort the textbook may be but one of many useful tools. It does not place a premium on storing up inert knowledge to be held until it can be spilled out on an examination paper. Rather, it makes the student an explorer, engaged in exciting discovery of meaningful knowledge.

I want to recognize at this point the cultural dimension of the problem of methods in education. It seems reasonable to think that the methods used in the classroom of a given culture tend to reflect the methods used in rearing the young outside the school. An authoritarian culture, for example, is apt to use authoritarian methods of instruction in its schools. And an acquisitive culture, is apt to think of learning as the act of acquiring a fund of information. The state of technological advance within a culture must have bearing, too, on the methods that are used to instruct. The child who has had an opportunity to take an alarm clock apart and put it back together again, or one who plays with a chemistry set, or builds a radio, is conditioned already for a problem-solving approach to school learning. On the other hand, the child who has never seen the inside of an alarm clock, played with a chemistry set, or made a radio will come to school with a different method of orientation. What the teacher can do is certainly conditioned by the cultural bent of his students.

Still, it is at this point that the schools can make their most effective contribution to change. They can teach students that learning is more

than storing up, more than simple acquisition. It can show students that the thrill of learning comes in the active discovery of new knowledge. As Mark Van Doren once remarked: "The art of being taught is the art of discovery, as the art of teaching is the art of assisting discovery."

4. Education for change is ultimately education for all.

There are various factors within education that bear an interlocking, circular, and cumulative relationship to one another. Simply stated, ignorance leads to more ignorance, while knowledge leads to more knowledge. Each is its own cause for being and each multiplies itself. For example, an ignorant man, in his daily rounds, is in contact mainly with ignorance and is shut off from sources of knowledge, because he is ignorant. Ignorance feeding upon ignorance breeds more ignorance. On the other hand, a knowledgeable man in his daily rounds has access to more knowledge, which in turn makes him more knowledgeable. In this way the great gul between the educated and the uneducated grows ever wider.

Look now at the practical implications for the education of children and youth. Let us take as an example the child who comes to school from a home in which the parents are uneducated and incapable of sharing in the values of the school and what is taught there. The child senses a great gulf between himself and the school. In a sense, the school teaches him a set of foreign values and skills. When he leaves school, he again falls into the pervasive subculture of the home and puts out of his mind the distraction of the school. The interlocking, circulative, cumulative forces of ignorance are too strong to break.

By contrast, take the child who goes to school from a home where the parents are educated. In this instance, the child finds home values reinforced at school. When he leaves school, he finds school values reinforced at home. The circular, cumulative nature of the educational process is enhancing his education and leading him on to higher levels of achievement.

The practical implication is that real change can take place only when all of the human components of education—children, parents, and community—can be brought into an interlocking, circular, cumulative reinforcement of positive educational values. I doubt seriously if an educational program that concentrates all of its resources and energy on the young alone can effect major changes. The pervasive

forces of the adult world are too strong. Children may rebel but experience would seem to indicate that finally they will find they place in the world of accepted adult values. And to do so they will cast off values learned in childhood and youth. If, however, the values of childhood are reinforced in adulthood, they will be retained and become cumulative. Children are not equipped to build bridges between alien points of view in their society. If those bridges are built by the society itself, children are happy to run on them.

Education for change must be education at all levels of society and especially among adults. The great world-wide movement for literacy—social, fundamental, and adult education, in my view, is absolutely essential for their cumulative value. Education cannot flow in separate streams; rather, it gathers force as it picks up smaller estuaries that feed into it.

Education for all is more than a democratic aspiration. It is a necessity, if education is to fulfill its real function as an agent of change in the development of a nation.

Modern education faces a world of human need. The sheer need to know was never greater. The need to know more about man, his diseases and his health, his poverty and his wealth, his high ideals and his inhumanity to man—all suggest the great burden education must learn to bear. There is no magic in education, except as we give it magic. Education can heal or kill, bind up or tear apart, lift or deprave. It is an instrument that can be used for good or evil. We must learn to use it well.

9-2. Cultural cohesion through education

"Education must be invested with its role as galvanizer of African values."

JOSEPH KI-ZERBO

Thus far in this chapter, we have expressed Western judgments regarding the necessary educational ingredients of cultural and scientific development. With antici-

pation we now turn to the voices of two distinguished foreign nationals for their views, Joseph Ki-Zerbo of Upper Volta and Humayun Kabir of India. With them we sense the urgency for education and its developmental role in their native lands. And we affirm the broad conception of education's responsibility in developing the total talents of their people, and the unity of their nations.

In the selection that follows Ki-Zerbo traces the steps needed to supply each of the missing ingredients in African cultural development—Africanization, democratization, and continual dynamic adjustment. This selection asserts the fundamental liberal faith in an education that “awakens in man the consciousness of his own dignity, and his possibilities of expression, creation and liberation.” Finally, with a clarity of vision that non-educators and all too many educators seem to lack, he forcefully asserts that it is not numbers alone but rather the quality content of education that really makes the difference: “Indeed the African of 1980 will be the product of the syllabi drawn up in 1961. The type of man who will rule over the Africa of tomorrow is potentially contained in these curricula.”

[Joseph Ki-Zerbo]

Education lies at the heart of Africa's development. It is one of the main levers for speeding up her advance in all spheres:

In the political sphere, through the establishment of a minimum education without which democracy is a meaningless term; in the social and human sphere, since it awakens in man the consciousness of his own dignity, and his possibilities of expression, creation and liberation (as, for instance, in the case of the African woman); in the economic sphere, since education constitutes the most profitable long-term investment; and in the international sphere, since it makes it possible better to understand and, hence, to appreciate other peoples.

Education is therefore in a strategic position in the great struggle for progress. Now, to adequately achieve these multifarious objectives,

Joseph Ki-Zerbo, “Education and African Culture,” *Education Panorama*, vol. 4, no. 2 (1962), pp. 8–13.

education in Africa has to be African. This means that it must be based on the infrastructure of specific African culture and grounded on the special exigencies of African progress in all fields.

Admittedly, African education poses a problem of quantity but the question raised by the "quality" content of education and the nature of syllabi has in this connection a more revolutionary significance. Indeed, the African of 1980 will be the product of the syllabi drawn up in 1961. The type of man who will rule over the Africa of tomorrow is potentially contained in these curricula. This is a highly complex question which interferes with all other aspects of public life because of its economic, social and political implications.

Education must be invested with its role as the galvanizer of African values. The latter do exist though they may not be expressed in the same manner as in Europe or elsewhere. This vital and gigantic task may be defined by specifying the key subjects and the methods of such renovation.

The key subjects

1. PHILOSOPHY

So long as philosophy is not a wanton reflection *in vacuo*, but (at least at the outset) on a given reality, it includes, apart from its universal aspects, other facets which bear the stamp of the particular genius of each cultural sphere. African morals, metaphysics and sociology do exist. Some of their ingredients have already been collated by research workers (for example, the works of Griaule and of his pupils on the Dogons, the Bambaras and their grandiose cosmogonies; see also the religious ideas of the Yorubas and the Bantu philosophy described by Father Tempels). The philosophy lectures in current secondary education totally disregard Africa's contribution. Not a single reference is made to Negro-African vitalism whilst painstaking lessons are given on Kantism, Behaviourism or Comte's positivism. It is readily conceivable that a young African who, having grown up solely in the towns and pursued his studies in Europe, should, on coming back to an African bush as an agricultural engineer or as a doctor, totally fail to understand the way of thinking of his clients whose life is wholly conditioned by sociological or even metaphysical exigencies. Likewise, it is easy to gauge the importance of the

study of African psychology for future teachers. African philosophy has to be studied and taught.

2. GEOGRAPHY

African geography has been neglected. Pupils know far more about the Seine and the mistral, for example, than about the Niger and the harmattan. Moreover, even when it comes to the study of general geography in a curriculum spread over a whole year, the climates, relief shapes, and modes of living studies are those of temperate countries. Far less importance should be attached to such chapters as ice erosion whilst the question of tropical erosion and pedology should be far more thoroughly investigated.

In addition, in the study of the Great Powers, it is important to be acquainted with the highly industrialized countries of Western Europe and North America, but still more with those countries which, owing to their history or geography (for example, the Latin American countries), are faced with broadly the same problems as Africa regarding the handicaps of under-developed areas (low density of population and means of communication, lack of equipment) and the methods of overcoming them.

Lastly, it is inadmissible that knowledge of the neighboring African countries should remain totally unknown. At no educational level is Ghana studied in Upper Volta. And yet Voltaic workers go to work there in their hundreds of thousands; Ghana receives all manner of cattle from Upper Volta and daily supplies the latter with bananas. The tribal populations of both countries are often identical.

3. HISTORY

History should be a key subject in the schools, since it is one of the major pillars of national conscience. Many people nowadays admit at last that Africa has a history but they claim that such history cannot be "objectively" and "scientifically" arranged for lack of the necessary documents. Thus, in those European books on the chronology of civilizations which present the landmarks of universal history, there is not a single date on the history of Africa. It can readily be shown that African history exists, can be written and that on more than one occasion it has played a decisive role in universal history.

There are very many documents available. They are either written documents of African, European, Hindu, Chinese, or Brazilian origin; vestiges of civilization (despite the destructive role of the elements);

or oral testimonies. At this juncture, such testimonies deserve special attention and on no account should be overlooked. Indeed, to quote only one example, the archeological sites currently being excavated in Africa have on some occasions been discovered as a result of a clue preserved from generation to generation by oral testimony. Koumbi-Saleh is a case in point. Moreover, are not written documents almost always the reflection of oral testimony reduced to writing, of an account heard, though not lived, by the writer?

As an example, in 1960, an eighty-year-old man can testify to events which occurred around 1830 if, in 1895 (when he was fifteen years old), he had listened to stories told by his grandfather who himself was born in 1815. It can therefore be said that whenever a lucid and experienced old African dies a whole page of his country's history is torn away.

It is therefore expedient to build up a methodology of African history which, although it would take account of these criteria that are particular to the civilization of the world (as, for instance, the traditional dating methods), in no way detract from what is commonly called "historical objectivity." Such a methodology will have to rest on a judiciously devised apparatus of documentation and "proof." This would entail a gigantic project of data accumulation that ought to be started immediately—a project to which Unesco could give decisive support. Magnetic tapes, films, and microfilms, photostats, nomenclature and catalogues have to be constituted. These would form a stock on which history specialists will subsequently be able to draw for their various studies. Each region needs to have a small team of archivists specialized in stock-taking, collating and classifying information.

Moreover, as in the case of geography, it is important that African pupils be better acquainted with the history of the countries of the world that have reached about the same technological stage as they have. They should know of historical events connected with their major religions, such as the history of Islam. There are a considerable number of Moslems living in Africa.

4. THE ARTS

Everyone knows the importance of plastic arts, such as sculpture and jewelry, and of music in African life. It would be a pity if that prestigious part of our cultural heritage should be doomed to stagnate while its echoes are passionately welcomed in other countries. It

is necessary to train music teachers specializing in African music and its North and South American extensions. Such teachers should be able to bring home to the pupils the value of their art; collect traditional themes, adapt and expand the use of African musical instruments; and, where possible, foster the development of a modern art in this field. The tom-tom ought not to be regarded merely as folklore designed to embellish the leisure hours of a handful still in love with the past. Beaten by a pupil, it can put rhythm into the beginning and the end of classes.

Likewise, architects will find formulae more or less based on the aesthetic forms of the past (for example the Sudanese style), which they would do well to follow instead of complacently and slavishly aping the so-called modern style through intellectual sluggishness. Craftsmanship must not only consist of a small shop supplying tourists with stereotyped and almost mass-produced pictures and statuettes, that are the very negation of art. Gifted elements ought to be selected and encouraged to use creative imagination through the establishment of fine arts schools or institutes. The prodigious theatrical talent of Africans ought not to remain unused, and African film production should be stepped up.

Artistic reproductions of the most famous masterpieces of African art could be mass circulated to adorn classrooms.

5. LANGUAGES

The question of African languages is a highly complex one. African languages spoken within a single state are numerous—at least several dozen per state. In addition, they do not generally have an adequate alphabet, grammar, literary texts, or a vocabulary rich enough to translate ideas and denote the things used in modern government, education and politics. The fact that these languages have no international reputation would also preclude their use on the forum of nations. Many African countries have therefore retained the language of the former “mother country” as the official tongue.

These difficulties are not insuperable, however. In any event, knowledge of these languages is an essential requirement of Negro-African culture—to accept their death would be to commit cultural suicide. Many languages have now been set down in writing. Dictionaries, grammars and texts have been drawn up by isolated research workers or missionaries, and are based on a rich oral literature—*épopées* [epics]

and legends, cosmogonies, tales, proverbs, poems and elegies—from which it is possible to compile anthologies.

The pedagogic requirement for developing African languages ought not to be neglected. It is far easier to learn to read and write in one's mother tongue and it is the method originally employed in the education of adults. . . . In view of the foregoing, it is readily understood why the teaching of such dead languages as Latin and Greek, which have no connection with African languages, should be considerably curtailed in the curricula. Arabic, on the other hand, is important from the standpoint of historical research, the study of religious texts and education in Mauritania, Senegal and Fouta in Guinea. It should be more extensively studied than at present. As for Ancient Egyptian, from which numerous African languages are derived, it should be studied at the higher research level.

6. OTHER CURRICULUM SUBJECTS

As the question concerns the new content of education, emphasis has essentially been laid on those subjects that call for the most far-reaching changes. It is needless to add that all subjects will be affected in the process. Thus, in natural science, the study of soils, plants and animals would necessitate considerable adjustments by choosing, for instance, ground-nut instead of sweet-pea as the papilionaceous type. And even in mathematics, especially at the primary level, problems should be set in order to use elements known to the pupils through their daily experience.

Techniques of Africanization

1. Stress should be laid on the fact that this syllabus reform involves total program readjustment, not shortening chapters in some texts, lengthening others, eliminating some books altogether, and replacing them by others.

2. The solution of this tricky problem of cultural decolonization cannot take place within the framework of micro-nations created by European decisions which, to say the least, were not motivated by Africa's higher interest. Such a task will therefore have to rest on duly recognized civilization circles and already existing cultural scenery, or else on the basis of a political agreement for the establishment of a cultural pool.

3. An indirect method for facilitating such Africanization is to develop the education of girls. Indeed, women are more attached to the past, to its traditions, customs and rites. They will therefore willingly adopt the reformed syllabi in the schools and facilitate the cultural African training of the next generation.

4. The education imparted will also have to be democratized to the maximum extent from the very beginning. Education based on social class is not in the African tradition. Elementary and secondary education have to be regarded as a whole and there can be no deep gap between the so-called primary education and at least the first cycle of secondary education. Such an arrangement would avoid the too-frequent imbalance currently existing between the number of pupils receiving secondary and primary education.

5. Lastly, it is necessary to pose the question of school textbooks without which there can be no real syllabus reform. It is here necessary to distinguish between a transitional period of revising existing texts and preparing entirely new material, and the later period of practical use of new texts in the classroom. . . .

There are some who object that the proposed syllabus reforms, as outlined here, will inevitably bring in their wake a lowering of standards which would jeopardize the equivalence of diplomas. Apart from the fact that such a fall in standards has yet to be proved, this objection ought to be regarded as a sequel of the process of assimilation in the colonial era that has succeeded in convincing many colonized people—especially in the privileged classes—that only diplomas obtained under conditions similar to those prevailing in the mother country had any value. Even assuming that standards should slightly fall in certain branches, it will be compensated for by an advance in other branches. And should there be a general fall, it would be a lesser evil than the introduction of insignificant reforms of no basic import which are out of touch with the new situation of Africa's independent states.

Even then, success must not be too readily taken for granted since the dynamic development will always call for fresh adjustments. Culture, any more than democracy, cannot be reduced to formulae or recipes. The advances achieved in the current period will in themselves be only a step, but a decisive step, in the cultural rebirth of Africa.

9-3. Education and national integration in India

"The growing generations must be trained up to be Indians who accept their total heritage."

HUMAYUN KABIR

One of the strongest pragmatic justifications for increased emphasis on indigenous culture in the emerging nations has been the quest for national unity. To this end the need for a feeling of common identity and self-esteem on the part of its citizens has sometimes led even the most hardheaded national leaders to foster such an emphasis. A genuine feeling of community arises less from geographic proximity than from a sense of things held in common, important among which may be a common intellectual heritage. "Few things are so conducive to national unity," writes Humayun Kabir, "as a common literary heritage."

The problems of India's cultural development grow out of a unique combination of phases and facets of cultural underdevelopment. India is one of the fortunate few among the emerging nations to have a rich recorded cultural tradition, the direct heir to some of man's greatest religious, philosophical, and literary achievements. In common with many new nations, she is victim of the centrifugal forces represented in various peoples with historical animosities and fears. She has in common with most nations emerging from colonial pasts an emotionally unacceptable foreign *lingua franca* coupled with a profusion of indigenous languages and dialects. The program here described by Humayun Kabir is an ambitious project to encourage "the acceptance of diversity in India as a fact, the adoption of the total Indian heritage by every citizen, the growth of a sense that

every minority however small has a contribution to make to the totality of Indian culture." Whether the means of formal education and public enlightenment that India has at her command are *sufficient* to forge the emotional bonds that bind man to man is a deep concern of Indian educators. However, no one can doubt that India is now taking giant steps toward building an educational system which can help to create Indian unity. And many are they who are committed to the success of the undertaking.

[Humayun Kabir

Throughout Indian history, we find on the one hand a tendency towards unification on the basis of religion and culture and on the other of fragmentation due to differences in language and customs and economic and political interests. Diversity is inescapable in a country so large in area and with such differences in landscape and climate. The fact that different peoples came into India at different times has added to the complexity. Even the Aryans did not migrate to India as a unified body of people but came in dribbles over many centuries. The same story has been repeated in later times and small scale migration into India was almost continuous till the beginnings of the contemporary age.

It has been a paradox of Indian history that in spite of a basic identity of culture, the country has been divided into kingdoms which have often developed sub-nationalities sharply distinguished from one another. In the past, the lack of communication encouraged local variations and often prevented clashes between different areas. Improvements in methods of transport and communication have brought different regions nearer to one another in physical terms but also provoked conflicts based on their diversity. Increase in population without corresponding increase in national wealth has made these local conflicts sharper. Many people are worried today by discords which arise from differences of language, religion, caste or community but these differences can be overcome and national integration achieved. . . .

Humayun Kabir, "National Integration in India," *The Education Quarterly*, vol. 13, no. 51 (1961), pp. 229-232. Published by the Ministry of Education, India, and reprinted by permission.

Total heritage

Very few Indians are willing to accept the total heritage of India and a large majority are content to draw upon and take pride in only certain sections or aspects of Indian history and culture. The fact that there were in the past many kingdoms and the preeminence of one meant the subordination of others is an example of the way in which territorial loyalties are attached to a part rather than the whole of India. Differences in religion and language have further encouraged this tendency. It is an unfortunate fact that heroes of one area, religion, language or community are often unacceptable to men of other areas, religions, languages or communities. The extreme example is the failure of large sections of Muslims to accept the heroes of ancient India as part of their cultural heritage and of many Hindus to accept the contribution of non-Hindus, specially Muslims, to the evolution of Indian culture. This fragmentation of consciousness is one of the basic reasons why fissiparous forces can so easily arouse the passions of one section of the Indian people against another.

Recognition of diversities

The long history of India seems to prove conclusively that on the one hand, the diversities of India can never be fully suppressed, and on the other that India has prospered whenever these diversities have been recognized and accommodated in a larger setting. Thus in the ancient period, when Buddhism and Brahmanism flourished side by side, India reached great heights of achievement and glory. When the rise of neo-Brahmanism led to disregard or suppression of Buddhism, the decline of India began. Similarly, in the middle ages, Akbar's policy of equal treatment for all religious communities led to splendid success while the attempt to reverse that policy was mainly responsible for the breakup of the Mughal Empire. Today, in a democratic setting, the recognition of and regard for diversity is even more important and can supply the basis for India's greatest contribution to the world.

There must be not only acceptance of and regard for the diverse elements of India's life, but what is equally important, each of these elements must be able to feel that it is contributing to the development of the whole of India. The majority must from the nature of the

case make the largest contribution to India's advancement, but unless the minorities feel that they are equal partners in this common national endeavour, they cannot be fully integrated into the nation while retaining their distinctive character.

Against this background of what appear to be basic facts, the achievement of national integration requires both long and short term measures.

Reorientation of school course

Among the long term measures, the first and foremost must be education. The growing generations must be trained up to be Indians who accept their total heritage. With this end in view, school courses, and especially the teaching of history, will have to be reoriented. While school histories must give the truth and nothing but the truth, it is not necessary that elementary histories should try to give the whole truth. Elementary history must from the nature of the case be short and simple and therefore highly selective. It is desirable that in such selection, some of the facts of clash and friction among territories, communities or religions should be slurred over and greater attention paid to the elements of cooperation in Indian life and culture.

Natural interest demands that school histories should be so prepared that children do not develop sectional loyalties early in life. They should feel the unity of the country in its history, but this does not demand any distortion of facts. As they grow up and go to higher stages of education, all the differences can be gradually revealed to them in an objective and dispassionate way. What has been said of the teaching of history applies with equal force to the teaching of literature. In selecting literacy textbooks for school children, we have to be careful to ensure that attitudes of hatred or contempt are not fostered in any section of children for any other section.

Scandinavian example

Very successful results have been obtained in the Scandinavian countries in dealing with past conflicts. Joint Commissions supervise the selection of textbooks in elementary schools in order to eliminate factors which may implant in the minds of small children hatred against another Scandinavian people. Norwegians, Swedes, Finns or

Danes have often fought in the past but reorientation of the teaching of history in their countries has created a larger Scandinavian rather than a narrowly national outlook. In India, a similar approach must be adopted to prevent the development of prejudices in the minds of children against any community, religion or linguistic or territorial group within or outside India.

There is no denying that apart from the struggle for economic and political benefits, one other major cause of friction among Indian peoples today is linguistic rivalry. The adoption of democracy naturally led to a demand that the affairs of the State must be managed in the language of the people and as such the demand for linguistic States was perhaps natural and indeed almost inevitable. It is an unfortunate fact that an impetus to this demand was given by the adoption of Hindi as the official language of India. This adoption was also natural as Hindi is the language of the largest single group in the country, but all the same, it created among large sections of other language groups a certain apprehension that they might be less well placed in economic and political matters than their fellow countrymen whose mother-tongue is Hindi. It cannot be denied that the insistence of some of the Hindi-speaking people for pushing ahead the programme of adopting Hindi and the resistance of some of the non-Hindi-speaking peoples against that move are due to the hopes of the one group and the fears of the other that adoption of Hindi will give certain advantages to the Hindi-speaking people over other language groups.

Development of Indian languages

This makes it the more necessary to phase the adoption of Hindi in a way which will allay the fears, legitimate or otherwise, of non-Hindi-speaking Indians. One way of doing so is for the Union Government to accept the responsibility of helping in the development of all modern Indian languages. If the Union funds allocated for the development of Indian languages are distributed among all the language groups on the basis of population, Hindi will still get the largest support, but peoples speaking other languages will have no cause or sense for grievance. In the last three years, the Government of India have increasingly helped in the development of Indian languages other than Hindi and this has generally aroused a very favourable response among non-Hindi-speaking peoples of the country.

One aspect of this assistance to all Indian languages should be the translation of classics from one Indian language to all other Indian languages so that a corpus of common Indian literature can be created. This in itself would help in the development of an all-India approach and outlook which it must be the aim of education to develop among the growing generations. Few things are so conducive to national unity as a common literary heritage. People who share the same legends and myths and respond to the same associations develop a common outlook in spite of differences in religion, custom or language.

Inter-state cultural exchange

Among long term measures, two others may be briefly mentioned. In spite of the over-riding unity of Indian culture, there are local variations which cannot be ignored. Very often the special features of one area are unknown or imperfectly known even in neighbouring areas. Strangeness at times leads to a sense of distance and even hostility. We have therefore to take measures for ensuring that the variety of Indian culture, at least in its broad aspects, is brought within the reach of all Indian citizens. It is with this end in view that for the last two years inter-State cultural exchanges in music, dance and drama have been organised and they have proved popular and instructive. Such programmes should be further expanded, so that people of one area or cultural tradition in India may become familiar with the culture of other areas or traditions and recognise elements of similarity which will strengthen the sense of national solidarity. This is an extension in the visual field of the attempt to create a common Indian literature through translations into every Indian language of the classics of each Indian language.

One example would indicate how necessary are such exchanges in music, dance and drama. The Tamil and Telugu people live in contiguous areas and for a long time they have lived in the same State and yet when last year the Kuchipudi dance of Andhra Pradesh was shown, perhaps for the first time in the city of Madras, there was wide acclamation for their performance. Drama and music are equally strong bonds for binding together people of different areas and we must expand programmes for exhibiting in one State the special art forms of other States.

Role of museums

Museums can also play an important role in national integration by making people of one area conscious of the contribution of other areas to the development of a common Indian culture. This is the main justification for the establishment of national museums in different parts of the country. In addition, every State Museum as well as local museums at the District level should be so organised that the special contribution of a particular area is seen in the background of the totality of Indian culture.

All these long term measures are basic but they will not show results for at least twenty or twenty-five years, the period required for the growth of a new generation. Short term measures are therefore inescapable and in the immediate present even more necessary. All measures, whether short or long term, must however aim at satisfying the four conditions mentioned earlier, namely, the acceptance of diversity of India as a fact, the adoption of the total Indian heritage by every citizen, the growth of a sense that every minority however small has a creative contribution to make to the totality of Indian culture, and the expansion of economic social and political opportunities for all.

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part five

EDUCATION WITHOUT FUNCTION

In Part Three we examined the reasons for education's concern with social change in developing lands, looked at some of the major changes bearing on education, and examined the social consequences of those changes. Running through this volume is the conviction that education, to be effective, must take the social scene into account, react to it, participate in it, and help to mold and shape society.

In point of fact, education frequently falls short of this goal, failing to realize its full potential as an energizing force for social reconstruction and modernization. We need to confront this fact and analyze and understand the reasons for it. In this part we examine two aspects of education's failure to live up to its great promise in the developing lands, the dysfunctional nature of education itself and the barriers to educational development that are imposed on it from the outside and that tend to diminish its renewing power. We turn first to a consideration of the kind

of education that is dysfunctional in terms of the demands made upon it.

When society's requirements run ahead of educational practice and productivity, when education serves social needs now extinct or passing, it may be called dysfunctional, irrelevant to current demands. Today in the modernizing world there is widespread feeling that too much education is irrelevant, out of touch and out of tune with modern life, dysfunctional in terms of the services it is currently being called upon to render. Evidence of this discontent with education is not hard to find. Country after country has undertaken education reforms, assembled outside and inside experts to draw new plans for education, and budgeted heavily from meager revenues to revamp and update educational systems. Educational change receives high priority almost everywhere, indicating a widely prevalent feeling that education is not carrying its share of the development burden. Looking ahead we shall examine some representative plans by which nations hope to make dysfunctional education more functional.

What are the marks of dysfunctional education? Education is always dysfunctional in relation to some unrealized expectation, goal, or target. In a free society expectations, goals, and targets are determined by the consumers of education who demand that it be adequate for their purposes. Goals change from society to society and through time. Education that today is criticized as inadequate for newly free and independent nations was probably regarded as adequate by the colonial powers that governed them prior to independence. Political and social conditions change with independence, and if education does not also change, it becomes dysfunctional and of little use.

In one sense, then, education may be judged to be *dysfunctional* whenever its results fail to measure up to what the society or the recipients of education expect its results to be. If, for example, the aim of education is to make the educated man employable and he remains unemployable, his education will probably be regarded as dysfunctional, even though the fault may not rest exclusively with education. Actually the judgment of whether education is functional or dysfunctional is seldom simple, for education generally has multiple aims, some of which are individual, some of which are social. Often the expectations or aims of some individuals may be in poor accord with the expecta-

tions of the broader society. When this is the case, what is functional for some individuals may be considered dysfunctional for the society at large.

Turn for a moment from the concept of dysfunction in education to that of function. Functional education among the developing nations has acquired an increasingly specific set of meanings, not always the same from country to country but with large areas of agreement in common. These meanings increasingly find their philosophic frame of reference in social reconstruction, which was discussed in chapter 5, in basic assumptions that tie education to social purposes and human well being. This philosophic direction imposes upon education a concern for economic systems that sustain life at adequate levels of physical energy and health, for political systems that are protective, rather than exploitive, of human rights, and for social, cultural, and religious systems that enrich and expand the scope of human expression. Such a position means that education is concerned with jobs, widening opportunities, free political institutions, and social and cultural values. Education that contributes toward these ends, or enhances the possibility of their attainment, may properly be called functional.

Education may be dysfunctional in many ways. When Mahatma Gandhi called Indians away from Western oriented primary schools, formal in operation and foreign in concepts, he asked for basic schools related to the everyday activities of village children. The spinning wheel was his symbol in education as well as in other social crusades. For education the spinning wheel expressed his conviction that in its earliest stages education should be relevant to the village children and the way they employ their time; it should help to sustain their families and to build their futures. Not everyone agreed with Gandhi about the dysfunctional nature of westernized primary schools. Such schools did open the door to middle and secondary schools, to the University and to white-collar jobs in the government and elsewhere. A parent who wanted his children to get white-collar employment, to join the country's new elites, viewed the primary school as quite functional, even though his own children might be among those who failed in the race for educational survival. Those students who advertise their credentials as "Failed B. A." know that they are still among the favored few.

The mixed Indian reaction to Gandhi's program of basic education illustrates how education may be functional or dysfunctional depending upon one's goals and aspirations. Gandhi, seeing the village as a valued way of life, wanted to preserve and enrich it. He saw it threatened by irrelevant education that not only brought foreign values to the village but also induced young people to leave for the cities where their presence created more social ills. On the other hand, certain elite groups in India valued the prestige brought by Western oriented education and hoped their children would achieve upward mobility and escape the village. For these groups, in the light of their own interests and expectations, the education that Gandhi viewed as functional threatened to be dysfunctional. In a democratic society, expressing diverse points of view, there is a need both for some consensus about the larger goals of education and for alternative programs that make it possible to accommodate a variety of specialized educational needs and individual aspirations.

What are some of the main causes of dysfunctional education? As a community moves from a primitive to a modern orientation it moves, in a sense, from the need to know to the need to teach. The traditional community, without a school, is itself an informal school in which children learn with ease to become adults by seeing, participating in, and absorbing the life around them. They experience education without schools. They learn what they need to know, and that quite easily and effectively. If, later on, such a community acquires a formal school, it is apt to be quite irrelevant to the life of the community, largely because informal education satisfies the need for knowing.

As communities become more developed, greater specialization is apt to create more demand for formal education, in short, greater demands to teach. The need to know the things that everyone in primitive communities agreed had to be known gives way to the need to teach that which not all agree must be known. While the demand for formal schooling increases as development progresses, community sanction for what is to be known, present in the traditional community, is apt to be lacking. During this stage of development, as in Gandhi's India, education may be dysfunctional for most of the children, and at the same time functional for a few of the children. The story James Maddox tells us

about education in Tepoztlan, Mexico, illustrates a community at this level of function and dysfunction in education.

The demand for universal or compulsory education can render old educational systems dysfunctional. Schools that were geared to serve an elite of the few are not well suited to the needs of the many. Simply to multiply the numbers of traditional schools may only compound the problem. Yet this is the temptation of the developing countries since the pressure to expand educational opportunity has become so great. Most educational officials simply do not have the time or resources to reassess their position and alter education to meet new demands. Increasingly, however, developing countries are undertaking long-range educational planning, appraising where they are, where they should be going, and then formulating specific programs to get there.

Perhaps the greatest single cause of dysfunctional education is that modernizing nations are simply expecting more of education than at any given stage it can deliver, demanding that it be an instrumentality of social and economic development, a strong agent for bringing about desired changes. The pace at which aspirations for development are moving makes the educational lag painfully visible. Education must gear itself for rapid change and become functional in giving shape to the future.

We should look briefly at some of the major social consequences of dysfunctional education. One of the most tragic is wastage. The village child entering a primary school whose program is not adapted to his needs is likely to drop out before having become functionally literate. The investment in him in terms of money, buildings, and teachers is largely wasted. Wasted too are his human potentialities and talents, which, only minimally developed, often do not enable him to create a more satisfactory life for himself. We should not imply that his dropping out of school is due solely to the dysfunctional nature of the school. The total community situation frequently discourages his continuing: the need for children to work in the homes and fields, the lack of reinforcement in the home of what the school is attempting to teach, and the failure to see education as a genuine alternative opening up new paths for children. But, in fairness, it should be said that the community may not reinforce the school because the

school has not demonstrated its relevancy to community life and concerns.

Another consequence of dysfunctional education is that it may produce large numbers of people whose education does not fit them for available jobs and who cannot be absorbed into the economy, even though specialized jobs in other sectors of the economy may go begging. We must keep open the question of whether or not any educational system, especially in developing nations, can so focus its program on their manpower needs that all who come through the system can be absorbed in productive employment. Too many other factors are involved in determining the level of manpower utilization. Still, a functional educational system can do much to discourage the excessive numbers of graduates with unneeded skills and encourage the preparation of more graduates to enter areas of needed skills.

One of the most serious consequences of dysfunctional education is the frustration that results from the inability of educated people to find satisfying employment. This kind of social dynamite is of real concern to many developing nations and their political leaders. The fear of having within the population a large number of unemployed, disgruntled, educated young people has led many leaders to doubt, at least privately, the wisdom of extending educational opportunities beyond the ability of the country to absorb the educated. But the currently strong and growing demand for more education cannot be ignored by political leaders in free societies. And because it cannot, intelligent educational planning assumes an urgent and high priority.

As we indicated above the causes for dysfunction in education do not always lie within education itself. They are frequently a part of the larger society. For this reason, in chapter 11 we look at some of the major barriers to improved education.

There is an advantage to looking at the matter of educational change from an analysis of the barriers to improved education. Only as one examines barriers does one gather a better perception of the social forces at work in the society and their directions. In chapter 11, therefore, we have selected articles that spotlight the points of resistance to educational change. These resistance points are of concern to teachers, educational administrators, planners and all who work for educational change in the developing countries.

The literature is full of discussions of these barriers to educational change. The very extent of the literature about them probably indicates something about both the large number of voices calling for change and the great strength of the resistance to it. The literature also indicates that it is easier to locate and describe the barriers than it is to overcome them. Our powers of analysis in the field of development education are outpacing our powers of planning and implementation. But good analysis is basic to good planning, and these selections will indicate that progress is being made.

We may properly ask: "What is a barrier to improved education?" It is a difficult question and can be answered, if at all, only in relative terms. The one consistent demand that runs through the following selections is that education be functional in terms of the modern requirements of developing nations. The selections properly reflect the urgency about education that is felt in the new nations. More now is being asked of education than ever before, and more resources than ever before are being poured into it. Expectations for education are high, perhaps sometimes too high.

With higher expectations comes a keener perception of those factors that stand in the way of full educational development. Most developing nations want educational systems that work toward the achievement of national goals. Illiteracy must be abolished. Agriculture production must be increased. Industrialization must spread. Science and technology must be advanced. Political institutions must be developed. Teachers must be educated. Health standards must be raised. Leadership and administration must be strengthened. Factors that impede the progress of education in furthering these goals are regarded as barriers.

An education that is not helping people and institutions to be operational in modern settings because it has not reformed itself is likely to be regarded as poor education. In this case an educational system is itself a barrier to its own improvement. In most such instances a conservative and traditional educational establishment is not responding to increasingly clear mandates from the society for its improvement. It would probably not be unfair to say that educational systems tend generally to be conservative,

slow to sense new urgencies for change, and overly concerned with preserving time-worn programs and practices.

However, most factors that are detailed in these selections come from outside of education to frustrate efforts at reform. In these cases educational change is clearly slowed by factors in the society over which it has little or no control. These considerations bring us to a most significant point: Educational change represents social change in its broad sense. Because of the reciprocating nature of education and society, one cannot think of long-range progress in one without progress in the other. The planning of development, therefore, must be total planning that advances together all the factors making for modernization.

The following selections deal with the dysfunctional nature of education in the developing nations and the barriers in those societies to improved education, but they should be regarded as more than this. They are positive indicators of the growing recognition that education must be equal to the great task of developing new human resources for these new nations confronting new and unprecedented problems. These selections are testimony to the commitment of new nations to make education equal to the great task of development.

chapter 10

Dysfunctional Education and Its Social Consequences

10-1. Transitional schools

"How well prepared are the graduates of the Tepoztlan schools to face the life ahead of them?"

JAMES MADDOX

In his study of the Mexican village of Tepoztlan, James Maddox puts into sharp focus the question of what should be the proper role of the school in relationship to change. One gets the impression that in Tepoztlan there is interest in the school, dependence on it, and on a developed program of education. Although informal experience and education outside the school is crucial in Tepoztlan, the school as an institution is important. Tepoztlan depends upon its schools in the total educational process. The basic question, however, remains: How functional are the schools? In Tepoztlan the schools seem distinctly set apart, as Maddox says, from the "village community, where the over-crowded adobe houses lack running water and electric lights and have so little furniture that sometimes there are not even beds." Even so, these schools are "far out-distancing other local organizations in bringing needed ideas to Tepoztlan."

James Maddox's contribution here is that through his study of Tepoztlan he poses basic questions that must be confronted if schools are to have genuine relevance to the communities in which they are set.

[James Maddox]

At 8:30 Friday evening, November 25—exactly one-half hour behind schedule—the formal graduation festivities began. They were to celebrate the end of the year in Federal Primary School “Escuadron 201” in the village of Tepoztlan, Mexico. Two hours later, 41 boys and 16 girls had received certificates which informed the world that they had finished the requirements of legally-approved primary schools in Mexico and were entitled to enter a secondary school of their choice. The following Tuesday evening, 16 boys and 10 girls were graduated by the secondary school in the same village. These were big and important days in the lives of pupils, teachers, and parents.

Throughout Mexico, similar ceremonies were being held. Let's take a closer look at the graduation exercises in Tepoztlan, and ask ourselves a few questions about their significance.

When we walked through the entrance of Primary School “Escuadron 201,” we were certainly not prepared for the scene that met our eyes. I had previously talked to a couple of the teachers, a few pupils, and three or four parents. I had assured my wife and sixteen-year-old daughter, who accompanied me to the fiesta, as it was called locally, that this would be a dull, uncomfortable affair. I had visions of being crammed into one of the classrooms, along with a bunch of nervous, boisterous children and a few parents. Instead, we found ourselves in a large open patio—the playground for the school—which had been especially decorated for the occasion. A tremendous aid to the artificial flowers and crepe-paper streamers which constituted the decorations was a bright, beautiful moon overhead. It gave almost as much light as the three dozen 40-watt bulbs that had been strung across the playground and which received only intermittent surges of “juice” from a portable generator out in the street. Benches from the schoolrooms had been placed four rows deep around a rectangular area in the center of the courtyard which, with its more brilliant lighting and numerous streamers of crepe paper hanging from overhead wires, was obviously the stage where the festivities of the evening were to take place.

More surprising than the bedecked and moonlit patio was the large number of people present. By the time the program was ready to begin, there were at least 1,000 people on hand. I made several counts of various sections of the crowd, and tried to estimate the total. This was difficult, however, because the courtyard was soon overflowing, and scores of men and teenage boys were seated on a little parcel of hillside which slopes gently from the courtyard wall. It is possible that those in attendance included one-third of the 5,000 residents of Tepoztlan. A few persons came from neighboring villages.

The first row of seats around three sides of the rectangle was reserved for the members of the graduating class. At one end was the speaker's table and about a dozen chairs for visiting dignitaries, most of whom were faculty members from nearby schools or officials from the Department of Education offices in Cuernavaca, the capital city of the state of Morelos in which Tepoztlan is located. The Maddoxes, however, were soon escorted to three of these chairs, when the principal of the school noticed that we were becoming the center of attraction. Numerous youngsters were pressing in from all sides to get a close look at the strange gringos. Women with children in their arms and grandmothers had first priority on the seats immediately behind the graduates and the visiting dignitaries. Squeezed in among them were the four to eight-year olds. Then came a mixed layer made up of godparents of the graduates, a few elderly men, a sprinkling of well-dressed women in their twenties who obviously returned from the city to see a younger brother or sister graduate, and other close friends and relatives of the class of 1955. These took most of the available seats. Behind them stood the men, each of whom was wearing his newest white straw hat.

It was these hats, as they reflected the soft light of a full moon and formed a wide moving border around the crowd that was seated in the patio, which awakened me to the obvious: we were deep in the earthy heart of Mexico. We were no longer part of sophisticated modern Western culture. Yet neither were we among the Aztecs. We were in rural central Mexico; one of those hazy cultural zones, where the modern and national is interacting with the traditional. We were seeing a part of what Cline calls "the third world," that great stratum of population which is culturally somewhere between the "modern" and the "Indian." Everything around us was typically Mexican—the dirt-floored patio, from which a light breeze would occasionally pick up swirls of dust and deposit it on the crowd; the artificial flowers

and crepe-paper streamers decorating the courtyard, when a half-mile away there were small fields of the most beautiful gladioli and daisies that one would want to see; the dozens of barefoot women, each with a long dark shawl around her shoulders which was folded in front to form a small hammock for the ever-present baby; the multitude of children hanging on to the loose flowing skirts of their mothers; the sprinkling of over-dressed young women; and the men in the shadowy background with their white straw hats so heavily filled with starch that the salesmen in the local markets fit them to the buyers' heads by pounding them to the desired shape with a hammer and a small circular piece of iron held inside of the crown. This was rural Mexico—a crazy quilt of the old and the new—and this cross section of it was assembled in the patio of a school, the important local institution which is theoretically trying to merge the two cultures, but which is very probably one of the most potent forces for destroying the old and enthroning the new.

When the nine-piece student band, just a few feet behind us, started to blare out the national anthem, the graduating class marched briskly into the open rectangle. In the forefront was the tallest girl in the class, carrying the Mexican flag. The color guard was made up of five boys, dressed in blue serge trousers and white shirts. About ten paces behind came the column of classmates. The girls were dressed in ballerina-length evening gowns, which my wife said were orchid-colored. I would have called them a hybrid of old-rose and purple. They glistened in the light, and created an atmosphere completely foreign to the sleepy rural village of Tepoztlan. The blue serge trousers and white shirts of the boys were more in keeping with the local setting. The girls' dresses had all been made by the same dressmaker in Cuernavaca. Literally they were not a part of this world, that is, the world of Tepoztlan. They were specks of that brisk new modern culture which one finds around Mexico City and a few other urban centers in the nation. The cost of these dresses represented a real sacrifice to the barefoot shawl-covered mothers and white-hatted fathers, who were seated a few feet away, beaming with pride at the splendid appearance of their offspring. Here was the Old and the New in bold contrast. Moreover, the New was of the very newest, and it was unmistakably the center of attraction.

Much of the program reminded me of graduation exercises in the United States—a short speech of farewell to the outgoing graduates by one of the teachers; several songs, dances, and recitations by young-

sters from each of the six grades in the school; a good-by speech by a member of the graduating class; a lengthy report by the principal to the school, in which she took a lot of time to say that 1955 had been a good year but that much remains to be done to make "Escuadron 201" the kind of institution that Tepoztlan deserves, and of course admonished the graduates to continue their education by attending a secondary school. After this, a district inspector of the Department of Education spoke, and finally the youngsters were given their certificates. It was a touching scene. As each youngster's name was called, he came to the speaker's table where he received his certificate, and as he returned to his seat he was met midway by one of his godparents who presented him with a gift and a huge bouquet of flowers and embraced him with the feeling which only a Latino can put into the *abracijo*. This was a real show of affection. It was one of those little niceties of life which North Americans rarely expect from people who live in extreme poverty, and who often appear to neglect the material welfare of their children. Yet the public demonstration of affection and giving of gifts were characteristic; Mexican peasants unquestionably have strong affection for children, and they also must show that they are keeping up with their neighbors.

The exercises at the secondary school, four nights later, were essentially the same as those held for the primary grades. The girls wore beautiful ballerina-length bluish-green evening dresses that had been made in Cuernavaca. About half of the boys wore blue serge trousers and white shirts, while the others wore blue serge suits. I was told that the parents of all of the boys had bought them suits for the occasion, but "some of the boys were just too stubborn to wear a coat and a tie as they were supposed to do." The speeches were a little shorter; the songs and dances were a little better; and representatives of the Lions Club in Cuernavaca were on hand to present a medal to the graduate who had the highest grades. Otherwise, the program was a replica of the one at the primary school. Here, too, each graduate received from one of his godparents a present, a bouquet, and a hug. The effect, however, was somewhat less touching, because the graduates were virtually full-grown men and women, and they obviously were not as thrilled to receive presents and flowers as the younger ones had been.

Following the formal graduation exercises, both at the primary school and at the secondary school, the seats and chairs were hastily pushed out of the way, a local orchestra set up its instruments, and a

dance was soon underway. I wilted at about midnight and did not stay for the end of either affair. I was told, however, that at the primary school dancing continued until two o'clock in the morning, and that it lasted an hour longer at the secondary school. It is commonly said that Mexicans dance whenever there is the slightest opportunity, and this, no doubt, is one explanation of why so many people attended these festivities. It is also clear that the schools are not blind to the need for good public relations. The teachers looked on the dance as one way of "winning the hearts of the people." Few teachers, however, have a clear-cut practical concept of how the schools might be made effective institutions for contributing something to the community beyond teaching the children the regular routine subjects.

This brings us to a fundamental question: how well prepared are the graduates of the Tepoztlan schools to face the life ahead of them? The question is not easy to answer, but one thing is clear. The curriculums of the Tepoztlan schools are not designed to train the students for the life of small farmers and shopkeepers in a rural setting such as the village of Tepoztlan. The schools and the courses of study they offer seem to be set apart from the village community, where the over-crowded adobe houses lack running water and electric lights and have so little furniture that sometimes there are not even beds. The schools have done little to foster home and community sanitation in a village where pigs, chickens, and dogs freely run in and out of many of the houses, and the toilet facilities of a house usually amount to no more than a half-hidden nook in the corner of the yard or adjoining the corral. Nor is there anything in the curriculums that would help a graduate to make a better living on one of the 5 to 15 acre farms on which most of the families depend for the major part of their income.

The first four years of the primary school are, of necessity, devoted mainly to teaching the simple skills of reading, writing, and arithmetic. In the sixth and final year, the basic curriculum is as follows:

Spanish	5 hrs/wk
Arithmetic and geometry	5 hrs/wk
Natural sciences	5 hrs/wk
Geography	3 hrs/wk
World history	3 hrs/wk
Civil government	2 hrs/wk
Total	23 hrs/wk

In addition, at least three hours per week are given to such subjects as vocational studies, drawing, music, and sports. The vocational studies include a little sewing, cooking and child-care for girls, and carpentry, painting, and some horticulture for boys. These are the types of activities which could conceivably make a real improvement in the level of living of the community. In reality, however, they are of little significance. The children of the primary school are too young to be taught very much in the way of vocational skills; the equipment for teaching is almost nil; and the teachers are short of ideas for constructive projects geared to local ways of living.

In the secondary school, which consists of three years beyond the first six years of primary instruction, the curriculum is as follows:

Spanish literature	3 yrs
Mathematics	3 yrs
Biology	3 yrs
Geography	3 yrs
English	3 yrs
Chemistry and physics	2 yrs
World History	2 yrs
History of Mexico	2 yrs
Drawing and Modeling	3 yrs
Carpentry and printing	1 yr
Sports and music	3 yrs

There are thirty hours of classes each week, and the school year is thirty-six weeks, when allowances are made for vacations and holidays. Most of the subjects are taught three times each week for a fifty-minute period, but in a few courses there are classes every day, with the result that others are cut to one or two class periods per week. There are no laboratories; the carpentry shop is practically without tools; and the printing press—the smallest I have ever seen—is about the size of my portable typewriter. Clearly nobody can learn to be either a carpenter or a printer with the equipment and material available. Biology is taught by a local doctor—there are also several other part-time teachers—but for what I could learn it is mainly “textbook teaching.” There are rare trips to the surrounding countryside so that students can become acquainted with local plants and animals, but these usually are in the nature of “excursions” away from the tedium of the classroom. By and large, the school is something apart from the village and fields of Tepoztlan. It is only distantly related to the

myriads of rustic, almost primitive, activities in which both the children and the parents are customarily engaged. The school is a place where city ideas (maybe they are cosmopolitan ideas) prevail. Mexico does not yet have an organized and respected body of rural knowledge, nor a corps of trained instructors to teach agricultural and allied sciences to the children of farm families.

It would be easy for those who cherish rural values, and who believe that education should be functional and utilitarian in content, to be highly critical of the schools in Tepoztlan. The cultural gulf between the schoolroom and the community gives rise to a situation that is far from ideal. At the same time, those of us from the United States need to look closely in our own backyards to determine just how well we have related education to our processes of living and making a living before we express too much disappointment in regard to our neighbors. To a person like me—reared in an isolated backwoods area of southern Arkansas; with vivid memories of the one-room school house in which I finished ten grades; and with even clearer recollections of the three-teacher high school where five subjects were taught (English, history, mathematics, Latin, and one year of physics), where a converted clothes closet doubled as both laboratory and library, and where “book l’arnin” was definitely suspect by a large proportion of the parents—the schools of Tepoztlan look pretty good. That my memories are four decades old is of little importance. It was not until the early 1920’s that the people of Mexico really gained control of their educational institutions, and forced the Federal Government to take major responsibility for them. Since that time, tremendous progress has been made. This is not the place to review the whole story of the struggles, strifes, and sacrifices that have gone into the national effort to promote education in Mexico, but one can easily get a distorted picture of the situation in both Tepoztlan and the nation if he does not recognize that this effort is only a generation old, and that it has had all sorts of handicaps—ranging from the general poverty for the country through a gamut of factors, such as lack of teachers, lackadaisical attitudes of parents, romantic ideals of leaders, and outright opposition of some conservative elements in society. As I read the history of this effort, I am surprised that the schools of Tepoztlan are doing as well as they are.

10-2. The school leaver looks for work

"It is well past time to ensure that the rising tide of educational expectations does not turn into an ebbtide of educational and social disillusionment."

JOHN W. HANSON

One of the most notable features of most modernizing nations is the high demand for education—and the accompanying expectation that schooling will assure a better life for its recipients. What happens, however, when the demand for schooling develops more rapidly than the ability of the economy to absorb school leavers? In this selection John Hanson uses the case of Nigeria to illustrate this problem as it is arising in new nations. In Nigeria the educational system is producing large numbers of school leavers with high aspirations, even while the economy is not producing jobs fast enough to absorb them. The school system is dysfunctional in relation to the absorptive capacity of the economy. How can a better relationship be found? Can it indeed be found with educational institutions of the type we now know? This selection by Hanson does not provide an answer to these problems, but it does suggest that unless rethinking along social and economic as well as narrowly educational lines takes place, the net result of schooling may be lives of frustration for many of its products and conditions that preclude sound development and presage political and social chaos for the new nations. Indicating new directions for thinking on these problems, the article sets the stage for many of the selections that follow in this volume.

[John W. Hanson]

The city of Lomé, Togo, boasts a magnificent luxury hotel, replete with its oceanside view and private swimming pool. It also boasts a presidential office building that is modern, well designed without being ostentatious, and a striking monument to independence. But a far more impressive sight than any of these is the view by night down the avenue leading to the monument: in the pools of light under each street lamp, bending over their textbooks, the students congregate, eager to pursue their subjects in the only light and quiet available to them. This scene, to a greater or lesser extent, is common throughout African cities: the street lamps, garish or feeble as the case may be, that light the streets are also the lamps of education. Throughout Africa, with only rare exceptions, the drive for education is one of the most inexorable forces in operation. The same drive is to be seen in different forms: in the hundred and fifty youngsters crowded into a flea-ridden animal shed in Addis Ababa to attend a private school run solely for the profit of the proprietor; in a thatched-roof school deep in the bush of Nigeria where ten to twenty classes compete with each other, as well as with the chickens and goats seeking shelter from the rain, in a single room; in the lines of mineworkers in the Copper Belt of Zambia, returning from the long shift underground to take schoolbooks in hand and attend, thousands strong, the schools for adults provided by the mining companies to help miners acquire their primary school certificate.¹ Only where

John W. Hanson, *Imagination and Hallucination in African Education*, East Lansing, Michigan, Michigan State University, Institute for International Studies in Education, 1965.

1. The copper mining communities of Zambia provide unusually telling indices of this drive for education. The mining companies have provided, in their townships, adult school for mine employees. Although a small tuition is charged, a large proportion of mine workers attend adult school after their shift, usually taking about six months to complete one grade of primary school. It was estimated in one mining township I visited that 2000 out of 9000 inhabitants were attending such schools. The result has been that whereas ten years ago it was almost impossible to find an African mine worker who spoke English, today it is almost impossible to find one who does not. This same drive for schooling is indicated in the youth clubs that have been set up to serve youngsters in the mining townships. In these clubs the most frequently requested activity has not been a "fun" activity such as sports, but "teaching

nomadic livelihoods or religious suspicions raise barriers to it, are the inroads of schooling not yet significant; and even there, the first signs of the forward march of the schools are to be seen.

But if the drive for education has indeed become inexorable and need not be stimulated, and if the faith in education is enormous, we still need to ask what is the *human meaning* of this drive and this faith. If anything, the existence of such a drive and such a faith increases the ethical requirement that education be indeed directed to legitimate human ends: that is *enrich* rather than merely *redirect* lives.

Perhaps the issue that here confronts every person genuinely concerned with education can best be illustrated by a personal experience. Several years ago when I was working in newly independent Nigeria, I had occasion to visit a number of schools so remote as to be accessible only by a boat trip of several days duration. One of the acquaintances I then made was Russell, a Standard V (fifth grade) boy in a primary school in the Niger delta country. He was a bright boy of considerable promise and had been introduced to me with pride by his teacher; Russell and I have remained friends "by correspondence" in the years that have ensued. Shortly before I had occasion to revisit Nigeria recently, I received a letter from Russell. In words reminiscent of Dickens, and no doubt accurately reflecting those diligent hours bent over his school readers, he wrote, "I have come to Lagos to seek my fortune." When I reached Lagos this past year, I prevailed upon one of my former University of Nigeria students to help me follow Russell's map and actually find him. His room, when we arrived, was clean and tidy, on a street in which refuse was piled head high, prohibiting any vehicular traffic, and across which streams of scummy, stinking water ran. He is living with a brother who works in the marine department and is on tour much of the time. Russell is "doing nothing," wandering and loafing. For months, he told me, he had been an "applicant," one of those thousands of Nigerian youngsters who seek endlessly for nonexistent jobs in the metropolis, wandering the streets between his "applications" alongside countless other youngsters outside the moral bounds of the

activity," a program initiated at the request of the youth in order to allow them to acquire education when they were either too old to be permitted to start the public schools, or when they had been forced out of public schools because of lack of space. The most frequently requested youth club activity was thus SCHOOL!

close-knit communities in which they had been brought up. But Russell is one of the fortunate few: he has since passed a secondary school entrance examination and for five years will be off the streets, I hope. But otherwise what would become of such a youngster, enticed by night gangs, unemployed with leisure on his hands and no salable skills? What will, in fact, become of those faceless street comrades of his who, not as fortunate as he, will never have the chance for further schooling?

Throughout much of Africa this problem is common.² Certainly it is not a problem created solely by the schools: illiterate and uneducated persons are also flocking into the metropolitan centers of Africa. And yet it cannot be denied that the schools do have a special responsibility, not only because they have helped magnify the attraction of the city but because, as instruments of social policy, they might well be concerned with the solution of social problems. The glitter of civilization, with which school courses of study are unintentionally filled, and the propaganda of the radio, the cinema and the newspaper magnify the mysterious magnetic power of the city, the same strong force that has for the past few centuries been altering the demographic face of the rest of the world.

This, then, is the first great dilemma of African education: the dream of a population that is entirely schooled, the tapping of Africa's "greatest resource," its people, and the stark reality of a growing mass of disillusioned, unproductive, uprooted schooled children, flocking to the cities where they join the ranks of the unemployed, or in some instances remaining on overcrowded holdings in the countryside, disgruntled and convinced their "education" entitled them to better things. Although it is hard for educators to disparage the drive toward schooling (or to challenge the assumption that schooling is the salvation of the underdeveloped lands) without appearing traitors to their profession, failure to challenge our basic assumptions about the identification of education with customary *formal schooling* may be the genuine educational treason. There is every reason to believe that schooling as we have known it, and the rapid expansion of this schooling, may be creating as many new problems for Africa as it is solving old ones. Once past the threshold where there are enough literate people to fill the mundane jobs of administration and commerce, a

2. See Callaway, Archibald, "Unemployment Among School Leavers," *Journal of Modern African Studies*, vol. 1, no. 3, September, 1963, pp. 351-371.

threshold that admittedly many African nations have yet to pass, a whole new range of problems and considerations comes into view. The drive for schooling, once whetted, does not slacken; and the consequences of schooling may merely serve to feed the smoldering, and intermittently glowing fires of social discontent, disorder, and violence.

Education for frustration is not apt to prove education for development; and it is well past time that educators took whatever steps are possible to ensure that the rising tide of educational expectations does not turn suddenly into an ebb tide of educational and social disillusionment. The hallucination that a schooled population will solve the problems of Africa is much too rampant. If education is to play even its own legitimate, modest role in solving these problems, many persons must demonstrate the intelligence and the courage to distinguish between *schooling* and *education* and to confront the task of educational reconstruction that these times require.

It should perhaps go without saying that it is easier to diagnose ills than to prescribe remedies. There is nothing in educational or social knowledge that enables us merely by viewing unfortunate social consequences or situations, to trace out clearly and certainly the educational remedies called for. But in tackling educational problems, as in tackling other problems, we do know that the assumptions we unconsciously or uncritically accept will largely condition the answers we develop. When these assumptions are seriously in error, the answers are not likely to be relevant. This is the situation that unfortunately prevails with respect to much of African education today. It exists both among educators who, knowing next to nothing about economics, accept comfortable doctrines about the economic value of education to justify conventional school programs, and among economists who, knowing next to nothing about school programs, assume their basic soundness and concern themselves chiefly with prescribing quantitative balances between levels. Such a situation is more conducive to facile conclusions than to genuine harmonious development in the emerging African nations.

Most easy and optimistic interpretations of the future of African education rest upon the assumption of the basic relevance of current education and concentrate their prescriptions on either (1) the expansion of the existing system, or (2) altering the slope of this existing educational pyramid. Most educational assistance, whether viewed from the standpoint of requests for and/or offers of aid, is based on these same assumptions and prescriptions. Certainly it is the assump-

tion and the prescription that underlies most American Peace Corps and educational assistance programs. The logic behind it seems impeccable to the educational establishment, here and abroad. The fantastic development of the Western world in recent decades has been in large measure an "economic and scientific return" from our educational system. The African nations wish modernization and similar development. It can, therefore, be concluded that if this system, in one or another of its Western variants, is introduced into the African context in proper doses, there is no reason why similar development should not follow and a similar return on the investment not be realized. For the more sophisticated, determining the proper doses becomes the scientific problem and increasing time and effort is given to deriving job categories and manpower requirements from national development plans. Educators, finding that these prescriptions do not really challenge the kind of schooling they are accustomed to providing, happily embrace them.³

Perhaps the sterility of educational thinking that remains too exclusively concerned with quantitative expansion of customary schools becomes most clearly apparent first when one considers primary education in a country such as Nigeria. In Western Nigeria it was estimated several years ago that 650,000 out of 800,000 primary school finishers were unemployed; today the number of unemployed primary-school certificate holders in Nigeria must number in the millions. The fate of these youngsters is quickly explained away by the assessment that their poor qualifications are not equal to the demands of a modern economy. The immediate and easy answer to the problem they pose is that the shape of the educational pyramid needs to be altered to reabsorb many of these youngsters into the educational system and to give them a few more years of schooling. This will ostensibly make them into products that can be more readily absorbed into the new national economy. Clearly, it is reasoned, there are or will be "open doors" for those with further education.

3. It is interesting to note that the most basic attacks on the nature and content of the educational program in Africa have come from non-educators especially two prominent economists, and that even their diagnoses of ills have been more convincing than their proposed remedies. See Dumont, Rene, *L'Afrique Noire est Mal Partie*, Editions du Seuil (Paris, 1962), especially Chapters VII and XIV; and "Le Developpement Agricole, Specialement Tropical," *Tiers-Monde*, Vol. X, No. 17, Jan-March, 1964, pp. 13-38; and Thomas Balogh, "The Problem of Education in Africa," *Centennial Review of Arts and Sciences*, Vol. VI, Fall, 1962, pp. 526-552.

But the first danger is that doors that do open for graduates from the conventional school system do not necessarily stay open very long. Obviously in some African states the need for even reasonably literate individuals is *at the moment* so great that it cannot be denied. But the doors of opportunity in underdeveloped countries can close very rapidly and not always where or when economic or educational experts might wish them to close. Tribal, social, political and inherited bureaucratic traditions or considerations may vitiate planning, as when crash pre-independence and post-independence Africanization programs filled government positions to overflowing, often with young, ill qualified individuals who now have long careers ahead of them. These persons are not apt to give way, despite economic or educational logic to the contrary, to new and better qualified persons. Political and bureaucratic considerations will not allow it.

But if these nonrational and even noneconomic forces make it all too easy for the doors of "opportunity," which once appeared open, to be suddenly closed, it does not follow that the faucet of schooling once turned on is going to be as easily turned off. One need not turn to the dangerous proportions of unemployment among the schooled in such countries as the U.A.R. or India to identify the danger here; Nigeria with its millions of primary school leavers already threatens to serve as an example. The easy solution may appear to lie in further training, training that invariably requires use of many of the scarce resources of the nation. For example, the problem of the unemployed primary school leavers was so obvious in Western Nigeria that by the time of the Economic Development Plan's promulgation in 1962, it was seen as meriting a special chapter.⁴ Unfortunately, the solutions proposed tended to reflect once again the spirit of facile optimism that comes from unquestioned faith in formal schooling and unbounded hopes for phenomenal economic growth. In the case of Western Nigeria in 1962, the educational faith was placed in the Secondary Modern School, which was to absorb this population, give it "practical" knowledge and skill, and turn it out ready to be absorbed by an expanding economy. It is already clear that these anticipations were in serious error and Secondary Modern School leavers are posing another problem in the employment market. Even while secondary grammar school education has been expanding rapidly (in

4. *Western Nigeria Development Plan*, Sessional Paper No. 8, 1962, Government of Western Nigeria, Ibadan, pp. 52-55.

accordance with the asserted need for middle level manpower), a Nigerian grammar school principal complains:

At this threshold of this new year, I feel so ashamed of myself. I have sat painfully for days working out testimonials for some sixty young Nigerians who are going to join the labour market. They were all terribly anxious to get into one or the other of the ministries . . . Some of their predecessors have been hawking their grade one certificates round for two years. They all cry, "We have got no jobs." There are, literally, hundreds of jobs in Nigeria. These adolescents are jobless, not because there are no jobs but because they are enemployables.⁵

Similarly, Ministry of Education officials are now beginning to show alarm about increasing numbers of unemployed secondary school leavers in Lagos. Since Independence in 1960, the number of universities in Nigeria has increased from one to five (with a sixth on the way), and there are signs that their graduates are having increased difficulty in finding placement outside of education itself. If the faucets of schooling are open full force and nothing else is done to direct or regulate the flow, the deepening pools of unused or misused manpower, inflammable for their accumulated social discontent, will await only for the spark to explode. There has been too much glib thinking that schooled manpower would attract or ensure speedy economic development.⁶ There seem to be many reasons for doubting this. At the present time in many parts of Africa the educational task may be less one simply of opening more educational faucets than one of making sure that the right faucets are opened and, equally important, that what flows from them is really suitable fuel for sound social and economic development in the African context, and not merely fuel for social or political conflagration.

5. Tai Solarin, *Our Grammar Schools Must Go*. Ibadan: University of Ibadan, 1963, p. 5.

6. There is a tendency among many educators to think that vocational skills will create a job market or assure an expanding, modern economy. This comes at least perilously close to putting the cart before the horse. Many other ingredients are required to produce economic development in African nations. An economist, just returned from Africa recently commented to me: "People look at the vast numbers of primary school certificate holders who are unemployed and assume that if they had been given vocational training the situation would be different. No one has yet explained where they would have found jobs even if they had been given vocational training."

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chapter 11

Lifting the Barriers to More Effective Education

11-1. Unconscious resistances to education

"Education is closer to the human spirit than to applied technology and, in consequence, has to take account of all kinds of unconscious resistances."

W. D. WALL

Perhaps the most formidable barriers to improved education lie out of sight, buried deep in subconscious resistances to change. As W. D. Wall points out in the following selection, education is more than a surface matter; it runs deep within the culture and within the individual. It taps the springs of cherished values that rise in the early years of childhood and shape attitudes and beliefs throughout a lifetime. Yet, modern education has a way of challenging what is held dear. Its emphasis upon experimentation and scientific method, the application of knowledge to practice and work, and its restless search for verifiable truth all bring into question traditional beliefs and modes of living. As Wall states, it is relatively easy to import applied technologies, but the closer one gets to areas of cultural and personal values and beliefs, the greater the incomprehension becomes. This may explain why the Western educator sometimes hears this plaintive question from his non-Western colleagues: "Can't we take your modern way of life with all its scientific and

technical benefits without sacrificing our cherished values and beliefs?" Wall alerts us to the nature of this profound and often unconscious conflict and increases our understanding of how it may function as a barrier to more effective education.

[W. D. Wall]

The achievement of independence has led emerging nations to refashion their educational systems, sometimes fundamentally but more often in the likeness of the system of a country whose technological, industrial, or political prestige is admired. The process has been facilitated in some cases by a period of military, economic, or political tutelage and has been backed in most developing countries by international action, by the Colombo Plan, by Point Four, and by more direct forms of aid. This change in system has been accompanied by a change of emphasis.

Every developing country now recognizes that education is an essential, if not the essential, instrument in a national social, economic, and political policy. If education is to succeed, it must unite the community rather than divide it and must train for maximum use all the available human resources rather than prepare a few persons for certain kinds and levels of more or less alien leadership.

The developing countries can be broadly and somewhat artificially divided into three groups, each of which faces different problems in the development of its schools. There are those, like many Arab states, India, and the states bordering it to the northeast, in which a strong native educational tradition, rooted in an ancient religious culture, persists alongside the system introduced by a western power. In contrast, there are others, like parts of Africa, which have tribal cultures without a developed educational tradition other than the handing-on of traditional skills and a puberty-induction ceremony. Finally, there are certain countries of Latin America in which education, of remote European (Spanish or Portuguese) origin, is by no means universal and has become associated with class or racial barriers which remain more or less potent today.

W. D. Wall, "Some Reflections on Education in the Developing Countries and in Europe," *The School Review*, vol. 66, 1958, pp. 56-60. Reprinted from *The School Review* by permission of The University of Chicago Press.

Each of these situations presents different problems to the reformer from within as to the expert adviser from without, and the question must be asked whether a system of education can be exported. The nineteenth-century imperialists tried to do so in their way. The whole Western world is trying to do so in ours: we export not only systems of education but accompanying aspects of a way of life which both we and the importing countries believe to be necessary or desirable or both.

Effective education is closely allied to the culture from which it grows and to which it contributes as a steadily modifying and shaping force. It is probably unnecessary to remind Americans of certain aspects of this truth, for Americans, more than any other people, have based their educational system on clearly stated ethical, social, and political ideas and have used it as an instrument in welding massive immigrations into a coherent nation. However, we incline to forget how much the success of formal schooling depends upon the cultural conditioning of the pupil before he ever comes to school and during his school life. For example, the early teaching of arithmetic depends upon concepts of number, quantity, weight, and the division of space which are acquired incidentally by children in our Western cultures, but such concepts are only imperfectly, if at all, present in some others. The North American or Western European child is surrounded by mechanisms, simple and complex; he is used to operations which have more or less remote but *predictable* consequences. He is, in fact, early habituated by his parents to an orderly and explicable environment, pregnant with notions of causality which are the basis of scientific and technological thought. It is quite otherwise with a child whose early life is passed in a primitive village, where the only mechanisms are the lever and the wooden wheel and where adults attribute inexplicable effects to equally inexplicable supernatural interventions. Such different backgrounds must profoundly affect the immediate aims, methods, and content of primary education. Equally they provide very different bases for subsequent technical and scientific training. Neither curriculum nor school organization can be identical in these different circumstances.

The restless search for verifiable truth, which is the basis of pure and applied scientific research and which has become, since the Renaissance, characteristic of all Western cultures, is itself a cultural product. Developed educational systems see it as the very basis of fruitful learning, and its embodiment in school curriculums subtends

technological advance. Countries whose religion is one of the forms of Buddhism, however, may have a traditional system of values and a philosophy which rejects amelioration of the temporal life as unworthy or, at best, irrelevant. Similarly, in some Mohammedan countries the traditional educational system may be didactic and based on unquestioned authority and rote learning. In either case, though there may be no overt clash, there may well be a deep underlying conflict which inhibits, not so much the intellectual acceptance of the notion of the value of research and of science, but that deep non-conformity and restlessness necessary to scientific modes of thought. This incongruity perhaps explains why, although administrators in many such countries are convinced of the necessity to reshape their education and of the value of research and are prepared to lavish scarce resources upon both, yet promising projects and institutions wilt and die when the foreign expert is withdrawn.

This clash may be pointed up in vivid ways. For example, the date for the official opening of a research institution is sometimes determined by the augury derived from the horoscopes of the international official responsible for the idea, the Western director, the minister of the country concerned, and the local staff members. In another country the reading readiness of children may be determined by a combination of Western tests and assessments with the augury derived from a disemboweled cockerel.

Such conflicts at the conscious or the unconscious levels may be dramatized within individuals. We are becoming increasingly aware of this in connection with the many thousands of foreign nationals who come to America or Europe for study. Beyond the linguistic, physical, and emotional problems of adjustment, to which a good deal of attention continues to be devoted, looms the greater problem of deep cultural incompatibilities, of which both students and teachers may be unaware. . . . Such incompatibilities express themselves in the ways in which experience has structured ability, categories, and modes of thinking and in value systems and tacit assumptions about man and society. It is relatively easy to acquire the overt techniques of another culture; it is another matter even to understand, let alone sympathize with, the strange modes of thinking and the whole cultural climate. Thus, applied technologies are relatively easy to import; but the nearer we get to those things which deeply touch social and personal life and modes of thinking, the greater grows the incomprehension. Education is closer to the human spirit

than to applied technology and, in consequence, has to take account of all kinds of unconscious resistances.

Little attention has been paid to this problem by those who send Western expert advisers to a developing country, and still less to the effect that the challenge of the new culture has upon the adviser himself, and therefore upon the advice he gives. Most experts (I speak only for those in the educational and the psychological fields) are now more or less adequately briefed, by the agencies which send them, on such matters as economics, cost of living, style of life, vital statistics, and such like useful but somewhat superficial background. Few leave for their mission with any real insight into the fundamental cultural, and therefore psychological, background of what they really have to do—to interpret two cultures, their own and that which they are seeking to help, each to the other and to enable experience to leap the gap in an assimilable form. Time and again we see the spectacle of an expert who, sometimes consciously but usually unconsciously, becomes insecure, frustrated, aggressive, and therefore hostile toward the culture into which he is sent. Instead of asking fundamental questions and using his techniques, knowledge, and experience to help others to answer his questions in *their* terms, he reverts to the safe line of trying to set up systems which have succeeded in his own country. He in fact imposes solutions to defend his own notions, and in this he is only too readily abetted by the administrators who have sought his help. Agreement and subsequent action then tend to become verbal or structural rather than real; the schools and the educational concepts remain only so long as the expert remains. If they endure at all, they do so as enclaves rather than as vital forces coloring the whole stream of the national life.

11-2. Social barriers to educational change

"The pull of the past is understandably great. So is that of the future."

COLE S. BREMBECK

In the previous selection W. D. Wall pointed out that there are unconscious resistances to educational change and emphasized the importance of recognizing and understanding them. The following article considers the source of some of the resistances to change and observes how they express themselves in educational practice and programs. Resistances to educational change, Cole S. Brembeck points out, frequently have their roots in social and value conflicts. For example, modern technology, a product of modern education, may create conflict with old and cherished values, requiring people to make difficult choices between new ways and ancient goods. Or again, traditional education has been an education for the elite, and it conferred great status upon those who were fortunate enough to acquire it. Today as the masses go to school, it is understandable that they tend to demand the same kind of education that the elite previously enjoyed, even though it may have little relevance to modern life and needs. And, the belief in fate, so common in traditional societies where hard adversity must somehow be explained, constitutes a barrier to educational change. For modern education teaches that man can increasingly control his own fate, or at least explain the factors that control it.

These sources of resistance to change quite naturally find expressions in educational practice. The professional and social distance between administrators and teachers, the authoritarian practices, the reliance on rote memorization and examinations all are more readily understood when viewed within the total context of the societies that have high resistances to change.

[Cole S. Brembeck]

The shepherd boy who guards his sheep in the rugged Khyber Hills of the North West Frontier of Pakistan illustrates both the problem and the hope of education in the underdeveloped nations of South and South East Asia.

The hope lies in the kind of work he is doing and the manner in which he learned his skill. Sheep and their care are vital to the needs of this boy, his family, and nation. From the wool his mother and sisters will make clothes to protect the family against the January winds which sweep the barren hills. The family's meager ration of meat will come from the sheep. The hide, surplus wool, and meat will provide cash for the family's needs and, if exported, much needed foreign exchange for the nation's treasury. This lad's indigenous education is directed at the basic needs of underdeveloped nations—food, human protection, and purchasing power.

There is hope, too, in the manner in which this shepherd boy acquired his skill in tending sheep. The learning sprang from experience. From early childhood he was aware of the importance of sheep to his family's welfare. As a little boy he rambled over the rocks after his father as he shepherded the flock. He watched at lambing, shearing, and slaughtering time. Almost without being aware of it, he learned his skill by practicing it. There was nothing remote or theoretical about the way he learned. It was practical, to the point, effective.

Yet, the shepherd boy's education is woefully inadequate in a developing land. It looks to the past rather than the future. This lad will tend sheep exactly as hundreds of his forbears before him. His attitudes will be the same, and his horizons will be no higher. He cannot respond to the demands of a developing nation because he is not prepared. In his own area of sheep husbandry the nation needs more meat, more and better quality wool, disease control, and better marketing practices. To help meet these development requirements the shepherd lad is not prepared and cannot participate. . . .

Let us look more closely at the problems of educational reform in underdeveloped lands. What obstacles do we encounter? I would like

to examine two kinds of problems: (1) problems of attitudes and values; (2) problems of educational practice which flow from these attitudes and values.

Problems in attitudes and values

RESISTANCE TO CHANGE

Generally speaking old cultures change slowly. They have built-in mechanisms for preserving the past. On the other hand they have few mechanisms for stimulating change. Village life flows from one generation to the next without major interruption, with human behavior surrounding the vital functions of livelihood, religion, and customs remaining largely the same. The ox cart and the wooden plow are symbolic of these traditional cultures where their design and use have remained unchanged for years, this in spite of rather concerted efforts to change them.

Should we imply that old cultures cling to these ancient symbols just because they are old? Perhaps the sanction of time is a factor, but certainly it cannot fully explain resistance to change. The wooden plow, for example, makes hard sense to a peasant. It is simple, easily constructed, and inexpensive. As he moves from his mud-walled village to his land the villager can carry his plow on his own shoulders or that of his oxen. When it breaks, a simple piece of wood will repair it. His plot of land is small and in plowing he spends a great deal of time lifting his plow around corners. His wooden plow can be swung around almost as easily as he can walk. It requires no lubrication; there are no moving parts. Finally, by cross plowing he can bring his field to readiness for planting, saving himself the expense of other equipment.

One can generalize from the wooden plow to matters of attitudes and values. They are probably held to because they serve some basic human needs. This does not mean, of course, that traditional cultures do not change. The human needs that are satisfied by the old attitudes and values give way to new human needs and aspirations which can be satisfied only by new values and attitudes.

What is the role of education in these changes? Traditional education has served largely to reinforce traditional values. It has been stubborn in its resistance to change. It must now assume a far more difficult role. It must help people preserve those elements of the past that are worth keeping while at the same time it helps them to

acquire new habits of thinking which are equal to demands of a new age.

TECHNOLOGY AND OLD VALUES

What kind of impact does the new technology have on old values? Must the cultures which accept the new technology be prepared to give up some cherished values? Or can both exist side by side? To most Westerners these questions seem no longer vital. But in the East they are crucial. For many people in Asia modern technology threatens fundamental values in both religion and custom.

Under threat, cultures naturally turn to their institutions to reinforce and preserve that which is threatened. Both religion and education are expected to bolster up threatened positions. There is suspicion among some villagers that secular education is not in the best interest of boys and girls, largely for the reason that it makes them irreligious. This is true especially in the Moslem world where a deep conflict exists in villagers' minds regarding the *Maktab*s, or mosque schools, and secular government schools. The *Maktab*s are associated with the long-cherished and sacred values, the government schools with new and somewhat foreign values. Educational reform which calls for still more emphasis on modern technology and practice must reckon with this reaction.

STATUS VALUES IN TRADITIONAL EDUCATION

Traditional education in Asia bestowed status on those fortunate few who possessed it simply because they did possess it. Just by having it, one secured a place of preference in society. Education entitled one to have "white hands," divorce himself from practical work, and enjoy the fruits of belonging to the intelligentsia.

Now a new demand arises. Newly independent states have work to do, work in building, engineering, sanitation, food production, and reconstruction. These states ask the educated man a new question: What can you do with your education? Can you put it to work to train a better government administrator, develop hybrid maize, create a cottage industry, operate a sugar mill, repair an engine, build a dam, or direct a cooperative? Having an education is no longer enough. Possession is not the end. It is only the beginning, the preparation for work.

While this is the new demand, the old expectation among the educated continues to an alarming extent. As one observes the educated

man of Asia move into his new responsibility as leader, innovator, and worker, one senses the deep struggle that is going on within. His education must now prepare him for his new role as active man.

TALK AS A SUBSTITUTE FOR ACTION

Traditional Asian education is primarily literary and verbal. Primary school children sit on the floor by the hour chanting the multiplication and division tables in rhythmic cadences. There are few realistic problems requiring the use of multiplication and division. There are no arithmetic games.

In secondary schools and colleges the emphasis is on verbal and written recall, the ability to discourse about the lecture and text book. Problems, research, experiments, and applications play no vital role in education. A seasoned university lecturer related an incident which illustrates the point. He was treating the Malthusian theory of population growth. His students mastered it well, and could discourse freely on all of its details. In a subsequent discussion, he shifted to this question: How does the Malthusian theory apply to Pakistan's population problem? His students were at a loss to answer or see a connection. And this in a social context where almost every daily newspaper carries an article on the threat of population explosion. The lecturer assured me that his students' inability to make the application was not due to their ignorance of the population threat. Their thinking simply could not make the leap from the classroom to the practical problems beyond the campus.

No one can doubt the effectiveness of this verbal training. To sit in a discussion with Asian intellectuals is completely absorbing and stimulating. The talk is marked by penetrating analyses, parries and thrusts, leading questions and illuminating comment. The country's ills are diagnosed with perception and candor. The self-analysis is both shrewd and honest.

This skill and delight in talk reaches down from the intelligentsia to the lowliest citizen. The peasant sitting on the curb of the bazaar with his basket of grapes will bargain with his customer for twenty minutes over a single bunch of grapes, then chat amiably for another thirty as his customer munches his fruit. The art of talk is highly regarded and fully developed.

Now the problem is not the talk. It is, rather, the inability to move from talk to action. This inability must be understood within the cultural setting of colonial people only recently set free to develop

their own lands. When a foreign power has for generations carried on the vital functions of government, reaching down and influencing the lives of the masses, the art of decision making and action taking is lost, atrophied through lack of use. Talk is the only action available to people. It finally becomes a substitute for action, an end in itself.

Asian education must now assume the heavy task of helping people move from intelligent talk to intelligent action. The gulf between talk and deed must be bridged.

SUSPICION OF GOVERNMENT

When a high government official visits an Asian village the villagers will spare no expense or work to entertain him. The streets are swept, dung heaps are removed, and elaborate preparations are made to feed him. Even though there is not enough rice in the poor mud homes for the next day, the table is spread lavishly with rice. The villagers may not know the taste of meat from one month to the next, but the table boasts of chicken, mutton, and beef. The feast is spread out of doors in a clean, shady spot, and while the villagers watch from a respectful distance, the guest, his entourage, and the village leaders enjoy the feast.

Now, part of this display springs from genuine village hospitality where the guest's wish is the villagers' command. But deeper is the fear of making a bad impression on one who has power over them. Through years of experiencing abuse at the hands of government officials, the villagers have developed a deep suspicion of them. When the guest leaves and the villagers remember the meager stores made now more meager the distrust will be reconfirmed.

Education is associated with government. Many schools, from the primary to the university, are simply called "government" schools. To them attaches some, though not all, the attitudes connected with government. There is no feeling that the schools belong to the people. The values they teach are frequently foreign to the villagers. Teachers are assigned from a distant government office and inspected by a stranger from that office. Education is not closely identified with village life and aspirations and there is an understandable suspicion of it.

Somehow, in a highly centralized educational system, means must be found to bring citizens into closer touch with their schools, and to dispel the attitudes that education is only the government's business. It must also be the people's business. The proposal in Pakistan to

bring the primary school under the operation of the local union councils may be a step in the right direction.

FATE AND EDUCATION

When misery is the common human lot it is easy to believe in fate. How else can one rationalize his existence and make it bearable? When death takes its high toll among village babies and children the bereaved parents can seal off some of the pain by believing that "God willed it," even though modern medicine could have saved the children if it were available. When the family's only buffalo cow dies, depriving it of milk, power, transportation, and body heat in winter, the loss is eased by "it was to be." A strong fatalism runs through the Asian mind and prepares it to cope with hard existence.

This fatalism has removed the person from participating in his own fate. The forces which determine his fate seem so far beyond understanding and control that it is easy for a person to withdraw and feel no responsibility for self.

Modern education cannot be fatalistic. It believes that man indeed has some things to say about his fate. He need not accept hunger as permanent, disease as God-willed, poverty as the natural condition. Education for national development is determined that people and governments through their own efforts, can bring a better life. The better life will depend on our ability to turn from fatalism to dynamism. Education must create within people confidence in their own efforts to change fate.

Education for national development in Asia must reckon with these attitudes and values. They are of long standing and will yield slowly. Still, education must come to grips with them. It must unfreeze resistance to change and open the mind for new ideas. It must embrace the new technology without jeopardizing time-worn and worthy values. It must create new values around applied intelligence. It must teach people to move from discourse into action. It must identify itself with people and help overcome suspicion of government action. Finally, it must help people control their own destinies.

Problems in educational practice

Before genuine reform can take place certain changes must come in educational practice. Here are some specifics.

EDUCATIONAL PLANNING

The distance between the office of education, whether it be at the divisional, provincial, or national level, and the nearest classroom may be only a few miles. But the professional distance is great. It is deeply disturbing to sit in the office of the educational planners, listen to the planning, most of which seems sound enough, and then tour the schools in the area. It is difficult to believe that the office and the classroom are a part of the same educational system.

In the offices the syllabi are planned. Sample: "We have prepared the syllabus with full regard to the needs of boys and girls." Detailed instructions to the teachers are drawn: "Write the word 'S A N D' on the board. Have each child trace the letters with the index finger of his right hand." Inspection of schools is carried out. Sample: "We hold periodic conferences of district inspectors to make sure that the syllabus is being followed." And explicit instructions for the writing of textbooks are formulated. Sample: "Place a big picture here, a small picture there."

What happens in the classroom? The conscientious teacher is trying to teach the syllabus and follow the detailed instructions. It is a depressing job. He feels that the planners do not understand the practical problems in his school, and he does not feel deeply or personally involved in the teaching process. No one has ever asked his opinion or consulted him seriously about the improvement of the syllabus. He must stick to the syllabus and text rigidly, for his students must pass the external examination. If 50 per cent pass the teacher receives his salary increment. If only 45 per cent pass, no increment. What he thinks, how he teaches, and his influence on students are of little concern, so long as his students pass.

There is a great gulf between those who plan educational programs and those who carry them out. But planning cannot exist for itself. Nor can teaching. Somehow the two must be brought closer together. Planning must flow both ways—from the top down, and from the bottom up. The full human resources of the educational establishment must be used. If this is done the planners will be better planners and the teachers better teachers. But a curriculum which is made solely at the top is apt to stay at the top and never reach the student for whom it is intended.

CLASSROOM PRACTICES

Classroom practices must be revitalized. Meaningful educational experiences can be carried on even in classrooms where modern equipment is limited.

The dependence on rote memory must give way to problem-centered learning in which the student is stirred to develop his ability to think. Much current teaching requires only remembering. A high school teacher walks into the classroom, textbook in hand, and writes six factual statements on the board. Turning to the class he gives the assignment. "Tomorrow you will know these six facts," he says, "and I will ask you about them." The six facts are dutifully written down to be dutifully memorized. The teacher then starts to quiz the class about the set of facts which it memorized from the previous day.

Given these limited ends, Asian education is effective. Students develop the ability to memorize verbatim and retain the content long enough to write it on examinations. That not much rigorous thinking is involved is illustrated by a geology student in the university. He had memorized a portion of the text word for word. The portion memorized contained an illustrative picture, captioned "Figure 2." In writing his memory work on the examination he included every word in its proper place, including "see figure 2." . . .

The student must be set free, even required, to participate in his own learning. He must work for his education, relive the pursuit of knowledge, dig for his new understanding. His power to think cannot be fully developed on a diet of predigested textbooks and lectures.

THE TEACHERS

A high government official recently charged that the college teachers of Pakistan work an average over the year of one hour per day. There were some rumblings of protests, but no one came forward with evidence that the charge was untrue. Taking into account the long and frequent vacations, the numerous "leaves," the infrequency with which some professors meet their classes (sometimes a month between class meetings) one might be led to conclude that as a profession the college and university teachers are among the most underemployed in a land of underemployment.

Other professional practices must come under scrutiny. For too many teachers the acquisition of the terminal degree marks also the termination of professional growth. The degree is the end, not the be-

ginning. The work is finished, why continue? Long vacations pass with little professional work or growth. Day-to-day preparations for class too frequently depend on years-old lecture notes, with little fresh material.

This professional behavior sprang up, of course, under the old education in which leisure was the end. And the professor was the best living example. His own life epitomized that of the intelligentsia which he helped to educate.

Now Asian nations need a new kind of citizenry, and a new kind of teacher. The old behavior of cloistered inactivity must give way to practices of vigorous mental application and hard work. The professor must now epitomize the new life of the nation.

The idea of inservice growth must reach down into the secondary and primary schools. The departments of education would do well to program for inservice training as systematically as for the development of syllabi. Developing the human resources of the profession is a far more important task than developing paper plans. Up to now paper has had priority over people.

More attention must be given to conditions of employment for teachers. Primary and secondary school teachers frequently receive about the same pay as cooks and bearers and are assigned a status below that of most civil servants. Most of them must take menial jobs during vacations in order to feed their families. As one of my friends put it, "How can you expect a teacher to give himself fully to teaching when all the time he is worrying about his empty stomach?"

...

EXAMINATIONS

The external examination which is drawn and graded by someone outside the school or university certainly has the effect of causing the teacher to "teach for the examination," and the student to point all his learning "toward the examination." Many university and college libraries keep an open file of previous examinations. The copies are worn and tattered from student use, the most frequently consulted item in the library. And why not? It is the sole evaluation instrument. Everything depends on successfully passing the examination.

Would abolishing the external examination help? Probably not. The practice has deep roots and prestige. The answer lies, rather, in modifications which make use of the prestige of the practice. Somehow, external examiners must be encouraged to make the examinations

tests in ability to think and apply knowledge rather than tests in simple recall. Because of the importance which attaches to these examinations, external examiners could have a profound impact on education by filling their examinations with problem questions which stretch the mind. Soon students would put pressure on instructors for assistance in answering these new kinds of questions, and a reorientation of classroom practice may follow.

Further, it must be recognized that skill in evaluation is not widespread among teachers. Their entire training is geared to helping students to pass examinations. Knowledge in the complex process of evaluation is lacking. Gradually, however, this understanding must be built up. Perhaps there is no better way than to bring the instructor into the evaluation process slowly. One university is experimenting with a plan in which the instructor now assigns 25 per cent of the grade, with the marks on the external examination determining the other 75 per cent. If the experiment is successful, the percentage of the grade which the instructor assigns will be increased. . . .

The task ahead

The position of education in Asia is changing rapidly. In rural societies of old Asia the mere fact that a man was educated entitled him to respect. That is no longer true. In modern Asia the educated man must earn respect by being productive, good at his job, and willing to work.

Education must help him meet these new demands. It can no longer be the education of the shepherd boy with its emphasis on traditional ways. New demands are on us. On the other hand, like the shepherd boy, young people must be educated to carry on functions vital to the improvement of human welfare. That education must take place in a realistic setting, full of actual problems and meaningful educational experiences.

At the lower informal levels education must be of the "folk" type—more concerned with how to wash clothes without ruining them, cook tomatoes, make a smokeless oven, and care for the baby, than with embroidery work and flower arranging. These can follow after elemental needs are cared for.

Formal education must now shoulder its share of the work of national development. It cannot stand apart, educating young people for a world which really no longer exists. It must lead, pointing youth

to the new attitudes, skills, and competencies which are required of new times.

Education must give stability to change. Change in modern Asia frequently comes in the form of upheaval. Education can help preserve the good roots and by new grafts give renewed vigor and productivity to the plant.

Most of all, the new demand for education must be molded into a resource for national development. That demand, as we said, is not confined to the top. It springs from the villagers themselves. It is a new, and as yet untapped, source of national strength. Education must make it productive.

The road that twists its way up from the Peshawar valley through the Khyber Pass to the highlands of Afghanistan rewards the traveler with surprises at almost every turn. One, completely unexpected, is an open-air school held in the shade of a railroad bridge which crosses a dry river bed. With boulders for seats and boards for slates, these children learn their lessons in the heart of one of the historic passes of Asia. The pull of the past is understandably great. So is that of the future. From this open-air school under the bridge many boys, for the first time, are going on to secondary school. More significant, some of them are leaving the hills, and coming down to join the colleges and universities in the valleys below. They represent the new challenge to education in Asia. The human resources which they possess must now be educated to advance the human good.

11-3. Traditional and religious barriers

"The landlords were quick to point out that to teach the people to read and write would turn them communist, for once they were educated they would surely revolt."

FREELAND ABBOTT

What are the social ingredients that facilitate the process of educational change? Can one distinguish and isolate the various elements that are at work in it? What do we know about the contending forces and how they play upon one another?

Each social situation has its own dynamics. We would not, therefore, expect that all cases of educational change would have the same components nor that these components would be related to one another in the same way. We can, however, by observing educational change in a number of different settings, begin to see some common elements and patterns. For example, one may generalize that in most situations attitudes toward educational change will be determined by self-interest. Some groups view educational change as advantageous to their interests, others view it as disadvantageous. In traditional societies persons in positions of economic, political, or religious power tend to support the status quo in education, regarding changes not to be in their best interest. On the other hand, those not in positions of power may tend to regard educational reform favorably as a means of achieving access to power. In modern societies the traditional attitude of power groups toward educational change may be reversed, for to maintain itself in a modern, technological society leadership depends upon an increasing flow

of skilled and educated talent into economic enterprises, government, and religion. In this case the self-interest of those in power requires change. In traditional societies, however, the self-interest of power groups tends to militate against it.

Other prerequisites may be identified in the process of educational change. In almost all cases of educational improvement, there is at least a limited recognition of the need for change. Further, there is some vehicle available to the advocates of change through which they can work. Finally, in most situations there is some compromise between contending forces, some rationalizing of new positions, and a venturing forth into new plans and programs.

Freeland Abbott, in the article that follows, gives us in microcosm a case-study of educational change containing most of these ingredients. He describes a plan to use the religious schools of a region of West Pakistan to teach basic primary school subjects, using local religious teachers for the purpose. Here are the landlords, religious leaders, and some professional educators opposing the use of mosque schools for this wider purpose. Here are the few proponents of the plan arguing the obvious need to educate children and the lack of funds for doing it any other way. Here is the vehicle for accomplishing change, the Department of Education, with its limited staff assigned to the project, reinforced by local education committees willing to work for the success of the project. Finally, here is the accommodation of conflicting points of view permitting the venture to proceed. More than a fascinating narrative, Freeland Abbott's story is a study in the process of educational change and improvement.

[Freeland Abbott]

I was riding a camel in Behawalpur, a region of West Pakistan distinguished by the sand in its deserts and the fruitfulness of its irrigated areas, because I wanted to get off the automobile roads and into the villages. Most villages of Pakistan and India have little need

Freeland Abbott, "The Makatab of Bahawalpur," *Saturday Review*, July 15, 1961, pp. 48-49, 64-65. Reprinted by permission of the author and publisher.

of roads; a path skirting the edge of the fields is quite good enough, and the sugar cane or cotton bound for market is carried on horse-back or camelback.

I wanted to get into the villages away from the roads because I was on the track of a novel scheme that seemed to me to smack of budding democracy. This was an attempt to persuade the illiterate villagers to develop their own primary schools when neither money, nor teachers, nor school buildings were available. I had first heard of Bahawalpur's efforts to lift itself by its bootstraps, educationally speaking, back in 1954, and I had then visited six or eight of the schools. But they were all, like the government schools, easily accessible by road. I was afraid that they might have been show places for the program. Now, five years later, I wanted to see whether the program worked, and I wanted to see it working where it was most significant—out in the villages away from the main roads.

For almost two weeks I had been traveling, on foot, by train, automobile, horse and camel, just to get a close look at this experiment in learning. I had visited many of these village schools, and, frankly, I was suspicious of them. It seemed to me there was more memorization than learning involved, and I determined, if I could possibly get off the camel when we reached our next stop, that I would really give those kids a grilling!

And so I found myself sitting in the mud-walled village of 211/9R—the name indicates its location in the Sutlej Valley irrigation project—about four miles from the nearest road. I was about to hear youngsters who had never seen an Englishman or an American read to me in English; but I remembered my suspicions, and my determination was as strong as ever.

"I know you can read that lesson," I said to the first timid fifth-grade boy who walked up to me, one dirty finger marking his place in a dilapidated reader. "Let's see if you can read this one." Being careful to select a passage that contained no new words, I turned to the next lesson, one I thought he had probably not yet memorized.

The boy looked startled, but slowly, then with greater assurance, he read without a single mistake. How his classmates beamed! How well he had done before the American visitor! . . .

Seven years ago there was no school here. Today sixty-five children, nineteen of them girls, attend classes every morning except on Fridays. The school itself, a thatched, mud-walled hut located at one end of a mud-floored courtyard, had neither desks nor chairs. It did

have a blackboard made by the village carpenter. Like the blackboards in most of America's early one-room schools, this consisted of wooden boards painted black. But it worked, and it was used.

Next year the thatched mud hut would be replaced by a brick building the men of the village were constructing themselves. . . .

This school at 211/9R, as fine an example of civic pride as one could hope to see, had been started largely with village initiative, and was administered by a local school board.

"How many of these schools are there?" I asked Shabbir Bokhari, the officer in charge of the program. Slender, bearded, and enthusiastic, Mr. Bokhari has something Lincolnesque about him and there is no doubt that he loves and understands the villagers.

"Since 1953," he replied, "when the program was started, a total of 132,000 students have been admitted to these schools, and 80,000 have finished the first three classes. There are over 2,000 separate schools, but we are able to make small grants—usually less than 100 rupees a month—to only about 500 of them. You see, the only funds we have are the income from certain lands in the irrigation projects that the government of Bahawalpur voted to use in 1953. This amounts to about 80,000 rupees a year."

I knew, too, that nineteen employees of the Education Department of West Pakistan, including Mr. Bokhari himself, supervise the program, and work to assure that set standards are maintained. Their salaries, and some travel allowance, represent the only outlay the Department of Education makes from its own funds for the more than 17,000 students enrolled in those schools that do receive grants.

"If you really want to know more about the *maktab* program," said Shabbir Bokhari, "then you should meet Hafeez-ur-Rahman, who was the Minister of Education in Bahawalpur when the program started.

"*Maktab*" he added, beginning to teach me the way he taught his village schoolmasters, "is the Arabic word for 'mosque-school.' One *maktab*, two *makatab*."

We found Hafeez-ur-Rahman at his orange groves near Harunabad, one of the pleasantest small cities of Pakistan. His specialty is the Kinoo orange, which seems to combine the juice of a Florida orange with the flavor of one from California. I should know. I certainly sampled enough of them while we talked around a cane table in the courtyard of his bungalow.

"We realized," said Hafeez-ur-Rahman, "that the literacy rate was abominably low, and before improvements of any kind could be made

in Bahawalpur, it had to be raised. In 1953 less than 10 per cent of the population in Bahawalpur could read." In 1953, I remembered, Bahawalpur was about the size of New Hampshire and Vermont combined; administrative changes in West Pakistan have since added to it.

"We had no money," Hafeez-ur-Rahman continued, "nor much else, either. We had to utilize that which existed, and admit that some kind of a start was better than none at all. So we did the only thing we could do. We decided to utilize the village mosques for schools, and to train the leader of the village mosque—the *imam*—to teach elementary subjects. Of course, the *imam* was often uneducated himself, and we had to teach him the first-grade subjects he was to teach his own pupils."

The program met with a great deal of opposition from the first, Mr. Rahman recalled. The landlords were quick to point out that to teach the people to read and write would turn them Communist, for once they were educated they would surely revolt. "This," said one of them, referring to the maktab program "would be suicide!"

Not only were the landlords opposed to the plan, but so, too, were the religious leaders, and Bahawalpur is one of the more rigidly religious sections of Pakistan. Their first reaction was to suspect any new educational scheme. "Of course," they said, "we favor education, for education is part of Islam. But this is a scheme of which we must be suspicious, for you want our children to study more than the *Qur'an*. Indeed, what you are going to do is to mix poison with the honey, but in the end you will kill true religion."

The religious leaders were quick to point out that Islam could not condone images of any sort in the mosques. Consequently, illustrated books would dishonor the mosque; mosques could not be used as school buildings if there were any pictures of animate objects used in the textbooks. This was a blow to the promoters of the program, and they put the issue before the local school committees.

"We won't insist on your using textbooks with such pictures," they said, "if you can find some other way that is just as good."

Despite the strictures of the theologians, every single schoolboard elected to retain the pictures in the textbooks used in its school. "There is nothing idolatrous in this," they said. "Certainly the boys in school are not going to look upon their textbook pictures as idols." So the reactionary religious leaders were stilled, but more important, in hundreds of villages across the region of Bahawalpur the basis of democratic action had appeared—the people on the spot were sizing

up problems for themselves, and making responsible decisions, without fear, for the good of all.

The Education Department of the Government of Pakistan did not look with favor upon these schools in their early stages, and many of the professional educators continue to look askance. Indeed, the educators had every right to wonder what kind of schools would appear when the teachers themselves had often less than a third-grade education. One educator told me that none of these *imams* had ever had a course in child psychology! I was unimpressed by this, for the teachers I had met were not so far removed from children that they needed a course to tell them what children were like. But the educators had another argument, and it did reach the heart of the maktab program.

"We teach four Rs, not three," Shabbir Bokhari told me. "Reading, 'ritin', 'rithmetic, and religion. If we didn't, we wouldn't get very far with these villagers. It is because we do teach religion that they so wholeheartedly sponsor and support their schools." Shabbir Bokhari believes the villager has to be persuaded, but that he has to persuade himself. To force a given line of action on him brings traditional defensive forces into play.

"The government told us to do it, and we do it," the villager will say without enthusiasm. But the village school in the mosque, because the villagers identify it with their own efforts, does frequently stir enthusiasm.

The mosque school idea is about as old as Islam itself, and the greatness of Islam during its centuries of renown was based on the widespread free educational system that provided an opportunity for every boy to go to school. And every school was associated with a mosque. With the decline of Muslim power these schools also declined; their curriculum became increasingly theological. The British in India, having need for practical ability rather than dialectical talent, bypassed them. But because the Bahawalpur maktab program is a renovation of an old and honored Muslim institution, it is more acceptable to the villagers.

There can be no question that to many of the villagers the value of the school lies in the religious training that the children receive. In a sense, the maktab is little different from any Christian parochial school, with this exception: it provides the only formal religious training these children receive. The occasional non-Muslim who attends a maktab is not required to study the Muslim religious subjects. Even

so—if the *imam* follows the curriculum—only about three hours a week, twice as much as in the government primary schools, are spent on religious instruction.

In about fifty villages the *imam* is paid by having the housewives put a handful of flour into a pitcher every day. Every month the *imam's* students collect the flour, thus saving him from personal begging. In a village of twenty-five houses the *imam* can realize about thirteen rupees a month by selling, usually within the village, the flour he does not need for his own consumption.

If the flour system were not used the *imam* would be paid by having twenty-five plates of food brought to him daily—two of which he might be able to consume; the rest he would have to sell for cattle food. This represents a tremendous waste, but the villagers are superstitious. The *imam* can bless each plate of food they bring him, but not each handful of flour. For this reason the flour system has failed in many villages.

The heart of the maktab scheme, however, is the instructor. Every month each of fifteen instructors, all of whom are under the Department of Education of West Pakistan, spends two weeks on tour. But the schools are so remotely spaced that he can visit only about twelve of them during this time. He spends another week at his headquarters—every instructor is a native of the particular area he serves—and one week at a training center.

Training centers vary from place to place, but usually they cater to five or six villages. Here the *imams* from the various makatab assemble under the instructor for practice teaching, and to criticize each other's efforts. One *imam* will learn that he speaks only to those in the front row; another may learn that he has been mispronouncing words. The *imam* has a chance to find answers to his questions, and the instructor has a chance to check on the *imam*. A constant check is necessary, for some of the *imams* remain uncertain about the content of the syllabus. More than one *imam*, I gathered, would much prefer to limit himself to religious teaching.

"We have had some strange problems when we tried to teach some of these *imams* to teach," Shabbir Bokhari said to me one day, a twinkle in his eye. "When the schools began we had some difficulty in teaching them basic educational concepts. At first, for instance, some of them had no sense of what a class might be. I remember going into one school, and there was the *imam* with thirty-six boys, each with a different lesson!

"'But,' the *imam* said to me, 'why should they all have the same lesson? After all, each boy is different from the other.'"

I was silent, for I had hardly expected to find the latest in American educational theory in the desert. But however excellent the theory, individual instruction is not the way by which many people can be taught to read as quickly as possible when there is very little money available, so the *imams* had to be indoctrinated into the meaning of a "class."

In every *maktab* I visited I particularly asked about the girls, for I suspected them of receiving short shrift. The girls of the village of Tugheri Sharif, for instance, do not meet with the boys. The wife of the *imam* teaches them the *Qur'an*, and this is all the schooling they get. Only about 4 per cent of the students in grant-receiving schools are girls—about 750 out of 17,000.

Coeducation, however, is not something that can be hurried. The idea that woman's place is in the home is not an exclusively Pakistani one. This is not the problem anyway. The problem is what a home should be like, and whether an illiterate wife and mother is a greater asset than one who is literate. Shabbir Bokhari does not hurry his villagers, but he does try to drop new ideas among them. One local education committee told him they didn't believe girls should be taught the same subjects as boys—only to understand the *Qur'an*.

"Well," he replied, "the Holy *Qur'an* contains information about mathematics, about geography, and about many other things. How can it be understood if one knows nothing about these other things?"

To this point there was no answer. It was a new concept for the Education Committee: they were being introduced to learning in depth. Mr. Bokhari let the matter drop so the committee might have time to mull over the idea. It takes time to eradicate prejudices, but they are eradicated more quickly when the decision is the villagers' own.

As in every school, the final check on the efficiency of the *makatab* is how well their students do in their examinations. Only the first-year students are examined by the *imams*; all the other classes go to one of 104 examination centers and take the regular examination for promotion drawn up by the Education Department.

On the examinations themselves the *maktab* students seem to do about as well as the government primary school students—but only the best take the examinations. The drop-out rate in the *makatab* is very high, and about three-fourths of the average *maktab* is in the

first class. At 211/9R, a well above-average school, there were thirty-seven students in the first class and twenty-eight in all the other classes together.

I spoke with several boys who had dropped out of the maktab. "Why did you stop?" I asked them. "Didn't you like school?"

Almost always they had stopped because their parents had needed them to work. Only a few boys showed no real interest in school as such. But the demands of a village economy are inexorable; children are born to work. The amazing thing is that there are so many illiterate village parents who are willing to sacrifice to insure that their children have a chance at even three years of education. In one of the maktab I visited—the school consisted of sixty boys sitting on loose straw on the ground, while the two teachers supervised matters from a *charpoi* (a string-bed) in front—a village youth had offered to take care of the cattle, to do the boys' work, so they could go to school. For this he received the milk of one cow once a week. With the price of milk at eight annas (about ten cents) a quart, he realized about twenty-two rupees every month himself—and the boys were able to attend school.

The fascinating role of the almost penniless maktab is that it has opened new horizons by showing the villager how he can expand his own skies through his own efforts. The enduring strength of the maktab lies in the resourcefulness it has developed in the villagers, and in the fact that, however crudely and unevenly, it does offer education where there had been no education before.

The maktab program is a fine example of how democracy develops out of the responsible pride and hard work of individuals on the bottom, rather than by being funneled in from the top. I asked one *imam* whether he wouldn't prefer to keep his increase in salary, but give up teaching and go back to doing nothing but leading the daily prayers in the mosque.

He looked at me, and I could sense the new respect he had found for himself. "No one likes to be idle," he said.

I remember seven-year-old Sayyid Muhammad Zulfarqan Ali Shah, who after just nine months in his maktab knew his multiplication tables through the eights, knew all of his Urdu letters, had read through one primer and was into a second. In addition, he had been introduced to the fundamentals of his faith. Not bad for a first-grader.

And I remember, too, in one village in which I spent the night, how the boys came bravely knocking on my door, to request that in

honor of my visit a two-day holiday from school should be proclaimed. Not bad for third graders!

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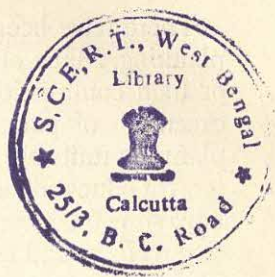
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part six

EDUCATIONAL PLANNING

Two characteristics of most of the emerging nations, and of the experts and organizations helping them, have been their obvious faith in education and their professed faith in planning. It is, therefore, not surprising that a confidence in educational planning has not only grown rapidly but also begun to take on the qualities of a new mystique. The concept of planning is, of course, not new to Western education. Good schools and good teachers have always engaged in planning. What is new to those from nations with decentralized school systems arises from the fact that much educational planning in new nations has been on a national scope. There is, however, general recognition of the urgency for such wide planning in developing nations, an urgency that arises in no small part from the relative poverty of both their financial and their educational resources when measured against their limitless ambitions. Although planning cannot solve the problem of unrealistic ambitions, it can help bring what is possible into being.

There have been many expressions of the increasing faith in planning. Many of the emerging nations have created ministries or high commissions charged with planning or supervising the execution of plans. Within ministries of education, additional planning units are beginning to appear. UNESCO regional centers for education and the United Nations economic commissions have shown concern for educational planning within their respective regions, and even more recently regional institutes for training educational planners have been established. UNESCO has further indicated its interest by the creation of an International Institute for Educational Planning. This growth of institutions has been matched by a corresponding growth in the literature on educational planning—a literature which can be barely tapped in this part. From this literature we have, consequently, focused our selections not only upon giving a picture of the nature and products of planning, but more especially upon the particular problems that strike educators as being of impelling urgency, as well as upon some aspects of the total picture that appear to be receiving little attention.

Although today there is much talk about “educational planning,” it is not clear that “educational planning,” in fact, means the same thing to all those who talk about it. As is the case of terms in other new fields, the nature and limits of this general term and its subsidiary terms—for example, human resource development, educational returns, the consumer value of education, or even educational “efficiency”—stand in need of clarification. Most often “educational planning,” as now used, seems to refer to the formulation of comprehensive national education plans, and it has been so defined in some recent publications. Depending upon the particular interest or persuasion of the planners, the emphasis among economists has ranged from costing internal units within the education system, to computing outputs in terms of trained manpower, to computing probable economic returns over a ten or twenty-five year period. Planning by educators within ministries has, on the other hand, often seemed to involve reorganizing the administrative structure of education and has too often been characterized by retaining boundaries between school and non-school education, reshuffling existing situations, or devising educational flow charts with new blocks—the contents of which remain essentially unchanged.

Hopefully, of course, educational planning will increasingly attempt to achieve more than economic goals and educational reconstruction will increasingly deal with substance as well as structure.

Although there is much to be gained in the emerging nations from comprehensive planning of total educational systems, not all good educational planning need cover the entire educational terrain. Much of the soundest planning may, and in fact *must*, be concerned with such relatively limited matters as rural education, scientific education, or on-the-job training. In addition to the matter of appropriate scope, educators would be well advised to remind themselves and others involved in educational planning of at least three cautions.

The first of these cautions relates to the heart of the matter. Much of what passes for educational planning is in reality not educational planning but solely economic planning for education. In such cases the content of educational plans is frequently overlooked, and some educational reports suggest the analogy of trying to plan an art exhibit by selecting the galleries and frames without a thought to the painting or sculpture that these are to house. Although it is true that educational content in a work-a-day world must be tailored to available resources, plans that consider no more than the gross allocation of resources—even as between primary, secondary, and technical education—are unlikely to solve basic educational problems. It is not only *how much* educational “space” is provided, but *how purposefully this “space” is used* that will finally determine whether an educational change is making a contribution to modernity or only overloading an already dysfunctional system, adding scrollwork to a dubious façade. It is as a reminder of this “heart of the matter” that the brief selection from UNESCO’s study on curriculum planning is included here in the chapter on issues confronting educational planners.

Secondly, it is well to remind ourselves constantly that plans formulated apart from the situations for which they are intended, like plants that are carefully nurtured in protected chambers, often wither untended in the field. As is emphasized by Kenneth Benne, the ethics of planning are ethics of involvement, and only by undertaking the scrupulous search for means of sharing appropriate spheres of planning authority can their soundness

be tested through wholehearted application. Planning that fails to develop responsibility, to build as well as use various levels of expertise, and to engender a sense of commitment in those concerned with implementation falls far short of its potentialities. Good planning of education will itself be educational. What this means in practice might well be illustrated in Malawi, which has already used educational planning as an important means of building genuine political competence through responsible participation. Here, within the sphere of primary education, there has been devolution of authority to local districts, which assume the over-all charge of improving the quality of primary education *within* the limits of funds currently allocated to them. But it is not the devolution of authority that is itself the answer: it is the devolution of authority, *plus* the charge of responsibility *and* the offer of help. Here authority is granted to local education authorities, each charged with the responsibility of conducting population and school location surveys, coordinating the results of these surveys, and guiding communities in planning the consolidation and relocation of schools. Help has been provided by the central ministry in the form of maps and simple devices for assembling, comparing and coordinating population and school data. The result has been a rationalized primary school system: each district has already produced and undertaken a three-year plan according to which redundant schools have been closed and new schools opened, so that grants to primary schools could be reduced without depriving a single child of primary school education. Involvement requires faith in the common man and courage; lacking these qualities, the wisdom of the expert is apt to be paper wisdom at best.

Finally, educational planners must constantly remind themselves of the moral overtones of their task. For example, B. A. Fletcher, the author of the first selection in this part, raises one such moral issue:

Freedom is a very much abused word, but a very simple definition is that it is the power of the individual to make choices—of school, of profession, of political party or of religion. Planning will certainly restrict freedom of choice in some directions: but it may increase it in others. It may restrict the freedom of the small minority of the population but widen it for the masses. It may restrict choices whilst capital is being invested in order that at a later time choice may be very greatly

widened in the prosperity that investment brings . . . Planning can mean a recasting of the whole field of freedom in such a way that on balance there is more scope for moral goodness and creative living than before.*

But we must not forget that our assessments of freedom and creativity—like our assessments of both present and future advantage (for example, of whether to increase or curtail primary education)—cannot be made purely in terms of statistical economics. Other frameworks for their assessment are at least suggested in the selection on the ethics of planning.

It is considerations such as these that lead us to fear that the stream of educational planning, although already encouragingly broad and deep, may still have unsuspected shallows. This should suggest the necessity for a multi-dimensional frame of reference for planning. Good educational planning, we believe, occurs whenever planners get the *range* of educational objectives clearly in view and work out the educational consequences of these objectives, working within the rigorous limits set by potential resources while avoiding the unnecessary limitations too often imposed by fixed and stereotyped approaches to education. Educational planning is, then, nothing mysterious. It is a way of looking at the future as well as the present, of calling upon competence in fashioning programs, and of having the courage to propose solutions that promise to achieve carefully selected ends. In short, it is “economizing” in the true sense of creating in education a working economy between means and ends. In such a conception of educational planning, which we believe is reflected in this part and generally in this volume, the elaboration of a plan is only a phase of the planning process and not an end in itself. The real test of the soundness of planning is not whether it produces a “good plan” but whether it produces good education.

If good education is to be produced it must be produced in the thousands of classrooms where teachers and pupils work together day by day. Planning that fails to reach the teacher and the learner is indeed an exercise in bureaucratic futility. Yet, we must confront the reality that much educational planning does not reach this crucial level, and, as we suggested earlier, it is not likely to

* B. A. Fletcher, *The Planning of Education*. University of Leeds Institute of Education, Researches and Studies No. 25, April 1963, p. 47.

do so unless there is a deliberate decision to develop the means to involve all those important segments of the educational enterprise, especially those at the level where teaching and learning, or the lack of them, actually happen.

Examine for a moment the odds against planning at the lower levels of educational systems in the developing countries. First, there is the bureaucratic reluctance of those at the top to share responsibility with those below arising from the fear that to do so may be construed as a sign of administrative weakness. Perhaps this is a carry over from colonial days when the prerogatives of officialdom were to be jealously guarded. The authors recall an instance in which the physical distribution of copies of the educational plan never got beyond the divisional administrative headquarters where they were carefully hoarded. Inquiry into the matter produced surprise about the concern and the comment that copies would be of no use in the schools. As far as the authors can tell, the distribution of copies of the plan was, in this instance, in inverse ratio to the distance between the administrative center and the village schools. At the center, there were copies for all the high offices and officials of government. They were knowledgeable about the plan. In the districts and villages there were few copies of it, little concern for it, and practically no specific information about it.

But the physical distribution of a plan is only symptomatic of something that must run deeper. We refer to the social distance between the planners at the center at one end and the teachers and the taught in the towns and villages at the other. The teachers in developing societies frequently feel alienated from their own society, barely able to make a living, and uncertain of the future. They belong neither to the village culture in which they teach nor to the Western oriented culture of the educational officials who sit in the center. These officials frequently belong to the "high culture" of the country, speak English or another European language, attend national and international conferences, and find it most difficult to develop rapport with the teachers in the countryside whose predicament they can understand intellectually but not emotionally.

The commitment to educational planning must be a commitment to transcend these social and bureaucratic barriers between planners and those whom the plan must reach and teach.

chapter 12

The Nature of Educational Planning

12-1. The development of the idea of planning in education

"In order to achieve a balanced life, governments would always need to plan side by side the development of their economic life and their systems of education."

B. A. FLETCHER

Any consideration of educational planning does well to begin with some perspective on the development of the idea of educational planning. It is not at all a new idea, although its current practice is definitely a twentieth-century expression of the present need for planning in order to handle the complex demands attending the computerized living created by modern science and technology.

B. A. Fletcher, in the following selection, places educational planning in its historical perspective and reminds us that "Plato's *Republic* can be regarded as the first systematic piece of educational planning, and it is similar to modern planning most in its acceptance of the inter-dependence of political aims and educational means." Particularly thought provoking is Fletcher's analysis of the parallel development of the stages in

our industrial revolution in relation to both the need to plan and the practice of planning. If we may infer a causative relationship of some kind between stages of industrial growth and stages of planning, then Fletcher's article poses for us some intriguing questions on educational planning in the developing countries. Should one examine carefully, as a prerequisite to planning, the level of industrial and scientific development as a guide for determining the content of planning most appropriate for the country? What factors entirely outside the educational system bear upon the success of educational plans? How can educational plans be harmonized with the total social, economic, and political development of the country?

[B. A. Fletcher]

In . . . a contemporary sense . . . educational planning . . . must be recognised as peculiarly a feature of the twentieth century educational landscape. This is not to say that from the very dawn of civilisation there have not existed philosophers and statesmen who are chiefly remembered for the quality and influence of their educational designs. But their work has always been much more of the nature of designing than of planning. They have prepared wide schemes for the betterment of a system of education, but their schemes have lacked both the dynamic quality and the material precision of twentieth century planning.

Plato's *Republic* can be regarded as the first systematic piece of educational planning and it is similar to modern planning most in its acceptance of the inter-dependence of political aims and educational means. Moreover its plans, like modern educational plans, were aimed at making the whole life of the State a training in citizenship and education the rational basis of society. The work of Plato, and after him of Aristotle, profoundly influenced the development of Greek society but, even so, it was not dynamic enough. It took too little account of the need to make a 'scientific prognosis of social forces', and so, when maritime trade grew in Greece and a new merchant class

B. A. Fletcher, *The Planning of Education*. University of Leeds Institute of Education, Researches and Studies, No. 25, April 1963, pp. 9-14. Reprinted with permission of the author and the Institute.

began to challenge the older landed aristocracy, political developments followed which in time destroyed Platonic and Aristotelian systems of education, at any rate in Greece, although they continued to influence European institutions for all the centuries that followed.

Plato and Aristotle were followed in Europe by a long line of great writers and teachers from Quintilian to Rousseau, all of whom engaged in a measure of educational planning and all of whom influenced society profoundly, but their plans were necessarily limited in amount and even more limited in time.

They were limited in time because all of them were educational Utopias. They were generally, as with *The Republic*, the products of a 'golden age' like that of the fifth century B.C., when social life had reached a temporary period of stability. They were hardly ever related to rapid and accelerating change. They were limited in space or in amount because they applied, and were meant to apply, only to a very small proportion of the people of a nation, and often merely to a social élite. This was necessarily the case so long as the economic basis of life rested in muscle-power. It was only when machines began to provide more wealth that the means were available for the spread of education beyond this privileged minority.

Planning, in economic affairs as in education, is now everywhere a feature of our own technological age. The invention of machinery has given to mankind the wealth and leisure which have made education possible for a steadily increasing proportion of the population; it has also injected an element of dynamism into social life which makes planning necessary if social forces are not to get out of control.

The early beginnings of the modern technological age are to be found in the eighteenth century when water power first began to be used to drive wooden machines of growing complexity and usefulness. There was, by the end of the eighteenth century, available for the European nations at least, a steadily increasing amount of actual horsepower. Water-mills were used to grind corn, to pump water, to beat hides, to spin silk, to crush ore and in many other ways to drive the new wooden machines which the power-saw made it possible to construct. In England alone, there was probably one mill to every four hundred people. Second only to the invention of the water-mill was the windmill. By 1836 there were 12,000 windmills in Holland and because a single windmill develops six horse-power this gave Holland alone a new availability of power of 72,000 horse-power. Thanks to these inventions and the development also of the wooden

clipper and of a new textile industry, a large new intelligentsia came into existence and works of art and scholarship were created for the first time without recourse to slavery. This new release of energy led to a victory of the human spirit, but, at first, this energy was chiefly directed towards the expansion of an educational élite by the proliferation of grammar schools, academies, and university colleges. The expansion of the base of education and of primary schools had to wait until the onset of the second industrial revolution, when the discovery of coal, iron and of steam-power made available vast new resources and wealth for the expansion of education.

Steam-power, applied to a wide variety of human activities, led to improvements in mining so that first iron and then steel made possible the invention of innumerable new machines and, equally important, of machine-tools. Soon the factory replaced the mill and there began those processes of manufacture in which large bodies of men were gathered in establishments where the processes of production were broken down into many series of specialized operation and which, in their final co-operation, produced the typical industrial organisation of the nineteenth century. Paradoxically, there was for a period, no release for the toiling masses, but, with the growth of great wealth for a minority, merely the development of a new type of industrial slavery. Lewis Mumford¹ in *Technics and Civilization* describes this bleak period in sombre terms. "These new mill villages and mill towns, barren of even the dead memorials of an older humaner culture knew no other round and suggested no other outlet than steady unremitting toil. The operations themselves were repetitive and monotonous; the environment was sordid, the life that was lived in these new centres was empty and barbarous to the last degree. Here the break with the past was complete. People lived and died within sight of the coal pit or the cotton mill in which they spent from fourteen to sixteen hours of their daily life, lived and died without either memory or hope, happy for the crusts that kept them alive or the sleep that brought them the brief solace of dreams."

A whole generation did indeed live and die without hope but their labour built up an industrial prosperity which, for the first time in human history, made it possible for the vision of universal free primary education to be conceived and then planned. And ultimately there came a time when in all the industrial countries of the world, primary

1. *Technics and Civilization*, p. 153. L. Mumford, G. Routledge & Sons, 1947.

education began to be planned and made available, at first in ugly schools to the rickety and undernourished children of the new industrial barbarism, but in course of time in beautiful, spacious buildings to the inheritors of the new wealth.

Nor were these the only gleams of hope. The notion of a necessary human progress began to animate the minds of men. The machine was by its nature an explosive element in the new economy and a nineteenth century poet like Tennyson could write "Let the great world spin forever down the ringing grooves of change". The idea of progress was at first a limited and also a limiting concept. Change soon began to be thought of as of value for its own sake. To be 'out of date' was to lack value. Increasingly everything came to be judged by the extent to which it ministered to progress, but progress was not judged by the extent to which it made men happier; and only a few prophetic spirits dared to ask whether the new industrial prosperity was producing an enhancement of life and an enrichment of the human spirit.

However, with the growth of a doctrine of inevitable progress there was injected into the thinking of politicians and educators the dynamic element essential to the beginning of planning. Since money was available for a large, and finally the complete, expansion of primary education, it was in this field but not beyond it that the first early nineteenth century planning began.

The idea of education for the common man was not a new idea in the nineteenth century. La Chalotais² in 1763 had set out a closely reasoned case for national planning in education. Prussia was actually the first European state to plan a comprehensive national system of state education. In 1808 the Prussian Department of Public Instruction began to put its plans into operation by sending seventeen teachers to Switzerland at government expense to study the training of teachers. By 1840 Prussia had built 38 Normal Schools and 30,000 new primary schools were in full working order. The very name Normal School, which has lingered on even until to-day, was a symbol of the kind of education for which primary school teachers were to be trained; an education aimed at producing 'normal' men or even the docile citizens of a powerful industrial and military nation. Attendance at the new *Volkschule* was compulsory and by the end of the nineteenth century free. The example of Prussia was soon widely followed.

2. *Essai d'éducation nationale*. La Chalotais. 1763.

In France, under the Third Republic, the revolutionary ideal of free, compulsory, secular primary education was achieved by the Minister of Education, Jules Ferry. In Great Britain, the same movement gathered strength and by 1870 W. E. Forster was able to introduce his Elementary Education Bill to the House of Commons and to secure a majority.

In America, the pioneers, their earlier democratic thoughts liberated from what they felt to be a European prison, had established free popular primary education earlier than in Europe and soon in all the developing industrial nations of the world state systems of education were planned and either associated or in conflict with the earlier unplanned private schools that related to an earlier and more meagre economy.

Primary education could be planned and its wide extension made possible by nineteenth century prosperity but only just; it was too often a cheap and nasty education for the sons of the labouring poor. Secondary education was inevitably more expensive. It called for more highly paid teachers, university graduates, and for more expensive equipment. So it had to remain for a longer period the privilege of a small minority; in most countries, for between 2% and 15% of the secondary school age group. For the planned expansion of secondary education, the adolescents of the industrialised nations had to wait for the third industrial revolution.

We are still living in the period of the third industrial revolution although the fourth has already begun to affect our lives. The third revolution differs from the second almost literally as white differs from black. It is the electrical revolution; and just as the very colour of coal and iron produced a black and dirty industrialism, so the new revolution began to illuminate it literally with the whiteness of light. The second industrial revolution was chemical and the third is physical. The power which the scientists had released in the second revolution came from atomic rearrangement in chemical change. The power released in the third came from the electric particles of which, it was now discovered, atoms were made. Electricity was a new and abundant source of energy and it soon made available immense new sources of wealth, both from its intrinsic power and also because its ease of transmission made possible quite new types of factory, the development of a great many new industries, and a much more flexible type of economy. There was a need also for many new types of specialist, for a new kind of managerial talent in administration, and so the third

industrial revolution required many more workers with the kind of education that can only be secured in a secondary school. Fortunately the new wealth which the industrial revolution released made possible a great expansion and ultimately a complete expansion of secondary education. It was not at first realised in many industrial countries that the new wealth was indeed sufficient to make universal secondary education possible, so that advance towards it was often halting and unplanned. Even to-day, in the United Kingdom, only a very truncated secondary education has been made available to all. The record is better in the U.S.A. and in the U.S.S.R.

Before the educational fruits of the third industrial revolution have been harvested a fourth industrial revolution has begun. This fourth revolution is bound to be more far-reaching in its impact because it rests on two quite new bases. The discovery of the way to release the immense stores of energy locked up in the nucleus of the atom has made available gigantic new sources of power which are of a different order from any previously discovered. It is sufficient to remove mountains, to destroy the whole human race, to blast off rockets to distant stars, or, alternatively, to give very great material prosperity and the leisure for education.

The second basis of the fourth industrial revolution is the invention of machines which, unlike those of the past that replaced man's muscles, now replace his brains. Electronic computers, properly programmed and applied through servo-mechanism to manufacturing processes are well on the way to producing the fully automatic factory.

The first social and economic results of these two discoveries can just begin to be perceived. There is a rich multiplication of consumer goods, a shortening of the hours of work, and such an increase in the techniques of communication by radio and television as to produce the swift contraction of time and space. For the first time in human history, though not many have really accepted the fact, not just secondary education, but higher education for all is now economically possible. Not yet, but in time, the choice before a country may be to take from its new industries either more material goods or more time for higher education. If the first road is followed at the expense of the second a society will come to satiety and boredom. Some of the Scandinavian countries are already in this danger as material wealth combined with high suicide and divorce rates show clearly. As a result, most countries have now begun the kind of educational planning which will allow the fourth industrial revolution to drive the

economy steadily forward, even if the wealth it produces is insufficient for some years to prolong the education of all citizens to the age of twenty one years or more.

In order to achieve a balanced life of purposeful work and enriching leisure for all citizens, governments would always need to plan side by side the development of their economic life and their systems of education. But it has not been this utopian urge alone which has influenced the modern movement of educational planning. A number of other forces at work in all modern societies have driven the planning movement forward from below.

The most immediate force driving governments to plan in education is the demographic one. The fourth industrial revolution, even more than its predecessors, has produced great and uneven population increases and equally large changes in demographic structures. Scientific advance in medicine has been no less spectacular than in physics so that infant mortality has declined and in most countries rising population presses on existing school provision in different ways in different years so that merely to absorb this extra child population in the existing school structure calls for very careful planning.

The second force at work comes from the expansion and democratisation of the secondary school system that was the mark of the third industrial revolution. Education, if it is any good at all, creates the appetite for more education. So, to-day, everywhere, the new army of secondary school leavers demands more and more higher education and presses forward to enter its institutions at a time when educational planning has not been undertaken early enough to create the means to meet this demand.

The third force at work is the demand from industry, commerce, administration and education for highly qualified specialists either in old fields of specialisation that are rapidly expanding or, more often, in the very many and varied new projects and enterprises that every week develop in our modern expanding and proliferating economy. A specialist, if his ability is not to be wasted, needs to have the support of perhaps five times as many sub-specialists. Each technologist in an industry will probably need to have the assistance of ten technicians—and each technician may need the assistance of five unskilled workers, so that a developing economy needs to be fed by streams of specialists and their assistant to different degrees at different periods in the development plan of the economy. Since the time required to produce specialists is long, and for all of those who assist specialists in

their work, fairly long, an economy that is following a planned development will require a concomitant educational plan if its progress is not to be slowed up.

The speed of technological progress in the fourth revolution has produced a great disparity between rich industrialised and poor agrarian countries. This is one of the basic facts of contemporary international life. The poorer or the developing countries have all realised that this technical and economic discrepancy can only be reduced by vigorous economic and educational planning. It is not surprising, therefore, that the movement of educational planning, with all its potentiality for good and ill, is probably strongest in industrial countries with a highly centralised economy, and in developing countries with a mainly agrarian economy. But planning is by no means negligible, and each year it grows more important in those countries that deliberately foster a mixture of state and private enterprise. It will be interesting therefore to look in closer detail at educational planning as it is developing in three different parts of the world; in the countries of eastern Europe; in western Europe; in Middle and North Africa; and then afterwards to attempt some evaluation of the planning movement as a whole.

12-2. Developing the plan

"The problem of educational planning in a federation such as Nigeria is both unusually complex and unusually promising."

JOHN W. HANSON

Perhaps the most distinctive feature of educational planning in the developing nations is that it is nationwide in scope. Planning for education on a national scale is foreign to the American experience, in which planning has been largely undertaken on a state and

local basis. The difficulties encountered in planning education in a developed country are themselves staggering. How much greater, then, must be the planning problems encountered by a new nation where the very lack of national cohesion and national institutions are given as reasons for the necessity of national educational planning. In the selection that follows, John W. Hanson uses the case of Nigeria to illuminate the problem of planning on a national scale in a new federation and to outline the salient requirements for such planning.

B. A. Fletcher, in the previous selection, spoke of the interrelationship between educational planning and other developmental factors in the society. In the Hanson study we see how the relevant considerations in the society determine the hard content of educational planning and how that content needs to be molded suitably to fit the resources available, and the social and political aspirations of the people.

[John W. Hanson]

Educational planning is a demanding task. In many respects the process of the planner resembles that of the architect of the modern skyscraper. The difficulties involved in serious educational planning are all too apt to lead nations into the easier pursuits of dreaming and sketching. Just as dreams and sketches are important in the architect's work, they are important in the work of the educational planner. But they are only the beginning of his work. Then must come the hard task of translating dreams and sketches into plans which can realistically guide and direct action. But in this process the difficulties besetting the educational planner are much greater than those besetting the architect. In part this is because the structure he is planning is far greater and far more complex. In part, it is because his building materials (namely, ideas and people) are both more precious and more complicated than the architect's. In part, it is because the structural principles upon which he must rely derive so exclusively from the social sciences rather than the physical sciences,

John W. Hanson, "Developing a Federal Plan for Education," *Nigerian Education*, ed. Okechukwu Ikejiani, Ikeja, Lagos: Longmans of Nigeria, 1964, pp. 56-60, 63-71.

and are correspondingly as yet less certain and less clearly defined. But the potential rewards are commensurate with the challenge, for the ultimate product of the educational plan is the citizen of tomorrow.

The need for a comprehensive federal education plan in Nigeria

The problem of educational planning in a federation such as Nigeria is both unusually complex and unusually promising. The Federation's goal of safeguarding the uniqueness and strength of the separate regions even while promoting unity and a sense of national purpose through the federal government holds great educational potential. This potential, however, can only be realized if the federal government assumes initiative in drawing together the best thinking of the nation in formulating a federal plan for education which will focus attention on common problems arising from the unified nature of the national economy and the national policy, from the common characteristics prevailing in the various regions, from the ever-freer movement of people within the Federation, and from the need for articulating educational units throughout Nigeria. Success both in formulating and in implementing a sound plan will require the full participation of both the regional governments and the teaching profession. . . . The major contribution of a federal plan must be to focus educational attention upon just such purposes through formulating guide lines within which regional governments maintain freedom and responsibility for operating programmes which also provide attention to unique regional problems and capitalize on unique strengths and opportunities. Any federal plan for education must then focus on common national purposes in education and also bring into the planning those charged by the constitution with responsibility for developing and operating the various levels of education in Nigeria. Only when this has been done can a unified, coherent, efficient system be developed—a system which will assure appropriate and cumulative education for young people moving from their first days in school, through the days when they choose one or another of the various specialized branches of the great tree of education, to that day when they finally leave the system as individuals prepared to participate in and contribute to their society.

The urgency and importance of a comprehensive national plan for

education in Nigeria is difficult to over-stress. The most obvious reason for this derives immediately from the situation in which all new African nations now find themselves: new times demand new answers. The educational systems which exist in African nations and in which they take understandable pride are nonetheless educational systems which are largely a colonial residue only partially reformed or reshaped to meet the needs of actual nationhood. For many reasons development of the educational system has not kept pace with the demands placed upon it. In part this stems from the fact that those interested in colonial education made a very understandable and in many ways commendable attempt to reproduce in colonial Nigeria the educational system which they themselves knew and respected. This happily meant the importation of many strengths, but it unfortunately also meant the importation of some of the blind spots and limitations of a system which functioned in the England of several decades ago but was irrelevant and inappropriate in Nigeria. There was also a general timidity and a slowness in approach to problems for many years, a pace which was fortunately rapidly accelerated as it became recognized that the time for both political and economic independence had in fact been moved forward by decades. Two other factors must be added. The first of these is the strong conservative force of tradition in education: all educational systems have built into them tremendously stubborn resistances to change, resistances which come both from the inability of large numbers of people to change their modes of operation rapidly, and also from our rather natural faith in and respect for that education which happens to have nurtured us. Against this conservative force in education must be set the dynamism of vastly enlarged horizons, new national goals, and the force of new economic planning in Nigeria. If education is even to keep abreast of such developments, the need for comprehensive and sweeping planning for the whole Federation becomes obvious.

The second reason why immediate, long-term, comprehensive planning for education is needed lies in the time span involved. There is, for example, the length of the production process in turning out high-level manpower: a physician, a scientist, a high energy physicist is not trained in one year! A further complication is the need to have this output ready at that precise time when certain phases of the industrial and economic plans must go into operation: skilled managers or technicians are needed at the point of opening the new industrial plant, not at some indefinite time thereafter. Finally, to

produce specialized types of personnel, highly qualified teachers must be provided even when these may be supplemented by new educational technologies such as programmed learning. This requires having the right kind of teachers available in sufficient numbers and in time to begin the process of training.

The third reason for careful, comprehensive planning is that the Federation must be concerned with the allocation of scarce resources both in money and in highly trained minds. Educational expenditure must take its place within a total national economic budget; what is spent on education cannot be spent on capital outlay for a steel plant. Minds ploughed back into teaching are not available in the industrial laboratory. Moreover, even within education hard choices have to be made. Merely to say that what is needed is more of everything begs the hard facts of life. Even in the most affluent and highly industrialized societies difficult choices are constantly being made within the field of education: certain programmes are curtailed in order that others deemed more urgent may be expanded. The same considerations apply when one wishes to supplement the available resources with assistance from outside the nation. Although Nigeria may attract outside capital and assistance, both in the form of trained minds and in the form of economic aid and investment, it is most likely to have continued success in doing this if it can be seen by the outside agencies that the resources provided are actually fitting into a comprehensive scheme which will in the shortest possible time enable the Federation to carry on the enterprise by itself. This is where clear forethought and national planning are required.

The fourth reason for a federal plan for education arises out of the very nature of nationhood. Many of the purposes and goals which are sought, political and social as well as economic, are national purposes and can only be achieved when all have a clear, mutual understanding of what they mean in operational terms, and achieving such an understanding requires a co-operative endeavour which can best come about through stimulation at the national level. A common federal plan, developed mutually, will not only enhance the sense of unity and common purpose in education but will deter developments in various regions which might otherwise operate at cross purposes with one another, and will at the same time provide the common ground rules and goals which make effective inter-regional co-operation feasible.

A fifth reason for a national education plan is to reduce to a minimum the type of waste which comes through inefficiency. A compre-

hensive federal plan which is adhered to can achieve this in several ways. First, only a nation-wide plan can prevent needless duplication of facilities and provide for the efficient production of the wide variety of specialists which is required by the new specialist society which we call the "modern" nation. Second, only a long-range plan can channel the understandable drive "to get things done" in directions that fit into the long-range picture. A sound federal plan is the best assurance we have of breaking through the barrier of blind tradition on the one hand and not finding useful energies and enthusiasm squandered upon irresponsible crash or competitive programmes on the other. Third, a sound federal plan can provide the guide lines which will facilitate transfers between schools or classes at the same level, and smooth transition to schools at different levels. Failure to provide for these can lead to personal frustration and tragedy for the student and to serious difficulties in the production and mobility of skilled labour in the nation.

Finally, it is the great moral responsibility of the government to plan an education system that provides for individually satisfying lives of contribution for all its citizens. Quite apart from considerations of national economic welfare, a sincere regard for the dignity of man requires that the nation does everything in its power to avoid the type of education that leads nowhere, that allows individuals to contribute irreplaceable years of their lives only to face the tragedy of unemployment or to find themselves unable to live lives of significant contribution. This is too often viewed as only an economic problem: it is much more than this. It is at heart a serious moral problem. It is not only that a nation cannot economically afford to find unfilled demands for specialized or skilled labour side by side with surpluses of badly trained individuals. It cannot morally afford to do this. There is, furthermore, not merely a verbal tie between the words moral and morale. The development of sound morale in the nation rests upon the moral basis of a sense of social contribution. The development of this morale and this morality must always be a central purpose of the entire Federation.

It is often mistakenly assumed that the concept of planning implies a sequence in which all planning is completed prior to any action being taken. Such an approach is highly unrealistic in education. Once broad goals and alternatives are established, specific planning can start and action within specific fields need not await the promulgation of the entire plan. With this caution in mind, then, it is

possible to suggest some of the major criteria which might guide those who would devise a comprehensive federal plan for education and against which any given educational plan might be measured for adequacy:

1. A sound national plan for education will provide for an intelligible set of goals:

- (a) which include political, social, aesthetic and moral goals as well as national economic goals. (Does the plan give attention to goals in terms of civic behaviour, social integration, aesthetic and cultural development, and moral education, or is it concerned only with the production of certain types of manpower?)
- (b) which specifies the qualities required as well as the quantities of persons sought in different categories or with different levels of education. (Does the plan give guide lines as to the qualities of the persons to be produced and does it charge responsible groups with significant curriculum modifications as needed, or is it satisfied with merely redistributing the school population by setting up more of certain kinds of schools?)
- (c) which includes democratic respect for the individual's life goals as well as the nation's goals. (Does the plan provide means for students to secure the knowledge necessary to make intelligent choices on vocational or life goals or does it force or assign them in terms of national goals?)

2. A sound national plan will be based upon an adequate assessment of relevant data including:

- (a) available skill and manpower resources. (Has a careful study been made of existing manpower and the skills this manpower possesses?)
- (b) the existing educational system, the extent of educational wastage, and the causes for this wastage. (Has a careful study been made of the programmes that exist within existing schools, including the problems of wastage, or does the plan rest merely upon the usual facile descriptions and explanations?)
- (c) current unused surpluses of labour, destitution areas, numbers and types of inadequately trained persons. (Has some study been made of unemployed labour and its previous training, the problems of city dwellers and rural youth, the civic and social outcomes of existing education?)
- (d) emerging as well as existing technologies in industry, com-

merce, agriculture and education. (Has some study been made concerning the new technologies which can be anticipated in the country within the next decade, and how these affect manpower needs? In particular, has attention been given to new technologies in education which may vastly affect the educational procedures available?)

(e) potential sources and types of external aid. (Has attention been given to available financial, material, and expert assistance which might be solicited from foreign nations and international bodies and under what circumstances it might be forthcoming?)

(f) traditional, ideological or religious restraints and barriers which must be circumvented or modified in the modernization process. (Has knowledge about attitudes, prejudices, customs and motivations been brought into play in making plans or has it been assumed that the intellectual milieu will be the same as that in already industrialized Western nations?)

3. A sound national plan for education will be based upon consideration and weighing of the wide variety of alternatives which are available, including:

(a) formal school programmes of the established types. (Does the plan take into careful consideration what portions of the task could be appropriately carried on in existing types of schools?)

(b) formal school programmes of new types. (Does the plan consider whether or not formal schools of types new to the nation, such as comprehensive or evening schools, might achieve many of the functions best, and if so, which functions?)

(c) programmes to be sponsored or carried on by industry and business including pre-service programmes, on-the-job programmes, release or half-time programmes. (Does the plan consider what portion of the task can best be carried on in industrial or commercial settings and what portion should be supported wholly or partially by industry itself?)

(d) patterns combining formal school and informal or on-the-job training. (Have planners considered co-operative school-job training programmes of novel types or have they been blinded by adherence to traditional techniques?)

(e) indirect educational means as well as direct educational means. (Has attention been given to the possibilities of training vocational education supervisors, directors and teachers who might

establish and carry on training in industry and commerce, thus providing a multiplier to the formal school's effectiveness?)

- (f) programmes for adult education and retraining existing manpower. (Does the plan provide methods for providing adult or continuing education for those already on the job, for retraining existing manpower to do the job better or to meet changed demands, or does it merely accept putting up with their inefficiency or plan to scrap them? Does the plan take into account the needs or fate of vast numbers of existing unqualified teachers?)
- (g) both varied and uniform curricula in a given school. (Does the plan consider unfreezing rigid curricula and providing more optional subjects and more variety to meet new needs, or does it merely assume existing frozen curricula patterns?)

4. A sound national plan for education will provide for adequate balance and timing:

- (a) by making hard choices and assigning priorities to different levels of education at different phases of carrying out the plan. (Does the plan make the hard choices necessary in any type of working plan and put first things first, or does it merely take the easy road of saying everything is needed and anything done will be an improvement?)
- (b) in order to have sufficient skilled and high-level manpower available at the time new industrial and commercial developments are to come into operation. (Does the plan dovetail with economic development plans and take the calculated risk of having manpower ready for industries which do not exist at the moment?)
- (c) to encourage participation in agricultural and hard labour aspects of the economy as well as industrial-commercial and office job aspects. (Does the plan face realistically the problems of stimulating, developing, encouraging or rewarding preparation for types of employment which do not rank high in the occupational aspirations of the public?)

5. A sound national plan for education will provide for the continual flow of new ideas and the preparation of personnel to carry on the processes as the job expands or alters by:

- (a) giving a high priority to producing the manpower necessary to educate further manpower. (What priority and what rewards are given to those entering various fields of teaching, especially such

- needed fields as technical and vocational teaching, and how is it assured that top quality persons are attracted into these fields?)
- (b) supporting research for the production of ideas and the assessment of problems. (Does the plan provide for the allocation of some scarce resources of money and high-level manpower to carry on research on economic, agricultural, social, political and educational problems?)
 - (c) leaving room for planned experimentation within the framework of the goals established. (What kinds of encouragements and safeguards are established for trying out on an experimental basis other alternatives than those primarily relied upon?)
 - (d) leaving room for local and regional planning within the national or federal plan. (Does the plan take into account what problems are best left entirely to local groups to solve and what approaches can best be handled by adaptation to particular local circumstances?)
 - (e) stimulating and recognizing the competence of educators. (Have procedures been established to turn over to trained educational experts and teachers the hard job of remaking curricula, methods, and instructional materials in order to meet established goals or does the plan leave off at the point of providing new administrative arrangements and new names for programmes? Is time being provided for imaginative and competent people to carry on this job by releasing them from other duties?)

6. A sound national plan for education will provide for the periodic and systematic evaluation and revision of plans as progress is made, new problems discovered, or new goals visualized. (Are certain bodies charged with periodic evaluation of progress being made and with making periodic reports on such progress? Is appropriate machinery provided for gathering the data necessary for such progress reports?)

7. A sound national plan for education will include realistic means of placing the plan in operation by:

- (a) indicating the extent and possible sources of financial support needed for various phases or aspects of the plan. (Does the plan indicate what portions of the plan should be supported by the national government, regional governments, local communities, industries, and outside agencies or sources of revenue or support? Has adequate costing of proposals been included or provided for?)

- (b) including specific charges or delegating specific responsibilities to existing agencies or proposing new agencies where no existing agency is appropriate. (Does the plan provide for further detailed planning and implementation by relevant agencies within the federation and provide for new agencies where no existing unit is suitable for the task?)
- (c) providing for some overall co-ordination in carrying out the plan. (Does the plan provide for some overall co-ordination of elements within the plan by some office highly enough placed to secure the respect and co-operation needed to make an overall educational plan effective?)

Such are the kinds of criteria against which a plan might be measured; such are the types of questions which might be asked of planners and their plans. It is clear that no federal plan will meet all of them, but it is important that as many as possible be adequately taken into account in the planning process. . . .

Pitfalls in planning

Although no one of the criteria proposed above for a comprehensive federal plan for education may be disregarded without some degree of peril, there are certain special warnings that seem appropriate when comprehensive planning is contemplated, especially by one who has participated in the work of advisory bodies in new African nations. Among the most persistent dangers which must be guarded against are certainly the following:

IMBALANCE

While planning is undertaken largely to avoid imbalance, it carries with it inherent dangers of merely replacing old imbalances with new. Among those dangers particularly worthy of note are the following: the tendency in a nation suddenly conscious of the need for specialized education to overlook correspondingly great needs for general or civic education; the tendency to emphasize those things which are easiest to quantify or count and to ignore things which cannot be as neatly measured; the danger of inadvertently giving up present gains in the pursuit of new goals. But in addition to such dangers of imbalance between parts of the programme, there are also dangers of imbalance in terms of immediacy. In Nigeria where the rate of present development has drawn attention to so many things that need doing,

the difficult choice must be made of what will be done first, what should be given priority in order that other needs may subsequently be filled. The answer to this problem is not nearly as self-evident as many would have one believe, and too frequently the facile answer given merely reflects the particular bent, bias or interest of the one who is so ready to give it.

PSEUDO-SCIENTISM IN PLANNING

Planning inevitably involves large elements of judgement as well as close scrutiny of empirical fact. It is never purely a mathematical calculation. While the economist in offering information or advice to planners generally indicates the nature of his assumptions, the possible error of his predictions, and the range of factors he has or has not taken into account, the educational planner may be only too willing to translate the economist's "if-then" statements into policies without further scrutiny or without balancing them against other needs. Often the most significant issues are actually hidden under tables of statistics, not laid out upon them. Part of the planning process involves the difficult problem of making value judgements between the demands of the economy, the social well-being of individuals, and the political necessities in the situation. Wisdom needs to be employed in making plans in any such context.

TIMIDITY

To many outsiders the timidity and extreme conservatism of the African educators and ministries is a source of constant amazement. Too many Africans express great belief in the desirability of Africanization of programmes of study and yet draw back when it comes to making the needed changes because of the dangers inevitably involved in the leap. Generally the excuse used for inaction is cast in the language of "standards", and the problem is posed in terms which indicate serious confusion between identity as the basis of standards and equivalence or relevance as the basis of standards. Professor Joseph Ki-Zerbo of Upper Volta in his remarkable paper on *Education and African Culture*¹ (published in *Présence Africaine*, republished by the World Confederation of Organizations of the Teaching Profession, and used in part as a background paper for the

1. Ki-Zerbo, Joseph. "Education and African Culture." *Panorama*, Vol. IV, No. 2, Summer 1962, pp. 8-12.

Addis Ababa Conference) has faced the issue most clearly and most courageously:

There are some who object that the proposed syllabus reforms . . . will inevitably bring in their wake a lowering of standards which would jeopardize the equivalence of diplomas. Apart from the fact that such a fall in standards has yet to be proved, this objection ought to be regarded as a sequel of the process of assimilation in the colonial era that privileged classes—that only diplomas obtained under conditions similar has succeeded in convincing many colonized people—especially in the to those prevailing in the mother country had any value. Even assuming that standards should slightly fall in certain branches, it will be compensated for by an advance in other branches. And should there be a general fall, it would be a lesser evil than the introduction of insignificant reforms of no import which are out of touch with the new situation in Africa's independent states.

Educational planners need this same courage, this same innovating spirit.

OBSESSION WITH FORM RATHER THAN SUBSTANCE

One of the surest ways to avoid solving an educational problem is to juggle the administrative arrangements of the schools or to devise new slogans or titles for existing educational programmes or procedures. Almost as sure a way is to deal with quantity considerations apart from content and quality considerations. Again the point has been made best by Professor Ki-Zerbo in his landmark paper:

Admittedly, African education poses a problem of quantity but the question raised by the "quality" content of education and the nature of the syllabi has in this connection a revolutionary significance. Indeed, the African of 1980 will be the product of the syllabi drawn up in 1961. The type of man who will rule over the Africa of tomorrow is potentially contained in these curricula. This is a highly complex question which interferes with all other aspects of public life because of its economic, social and political implications.

This content dimension is the underlying one which must face the designers of a significant federal plan for education.

FAILURE TO BALANCE UNITY WITH DIVERSITY

The great strength of the federal system in Nigeria is that it provides a means of balancing the needs for national unity and the means

of solving nation-wide problems on the one hand with the claims of regional diversity and uniqueness on the other. A sound federal plan for education must, then, help rather than hamper the regional ministries and local communities in adapting education to fit local needs which are complementary to national needs. A sound federal plan will do just this: it will provide a useful framework which will provide that sense of security and reinforcement which will in turn encourage local and professional initiative. Creativity, it must be remembered, is not the product of lack of limits or lack of purposes: it occurs within a framework of limits and purposes. Providing this framework in order to promote genuine educational creativity at the individual, local and regional levels is one of the greatest services a sound federal plan for education might render.

12-3. A small state plans for investment in education

"No policy for education can be relevant unless it takes into account all the economic, social, political and spiritual factors of our time and circumstances."

WEST CAMEROON EDUCATION PLAN

The past few years have seen the rapid proliferation of national plans for education, most frequently aimed at new goals of economic productivity and economic development. Such plans have, as might be expected, varied enormously in their realism and breadth of vision they express, the comprehensiveness and soundness of the factual bases on which they rest, and the detail and completeness with which they are promulgated. The following brief educational plan, published by the Government of West Cameroon (one of two states in the bilingual Federal Republic of Cameroon) is the product of the thinking of educators in a small state that is administered with a limited number of

personnel and a minimum of outside expert assistance. The plan is presented here not because it is a final product of elaborate educational planning (which it does not purport to be) or because of any foundation in comprehensive economic base studies (which it lacks), but, because in its very brief compass it does face most of the problems and considerations that more elaborate plans have had to face. One further consideration commends it. In its final paragraphs it reflects the modest and refreshing quality of providing for future modification when further professional assistance and the research to provide a sound factual basis for planning become available. In so doing, it underscores the importance of the living and growing nature of sound planning—the fact that healthy plans, to remain healthy, must grow and develop with further experience knowledge and insight.

[*West Cameroon Education Plan*]

INVESTMENT IN EDUCATION

INTRODUCTION

General Considerations: Government believes that education is an investment in human material which can reap rich dividends. No policy for education can be relevant unless it takes into account all the economic, social political and spiritual factors of our time and circumstances.

The Economy: The first general consideration must be to examine the fabric of our economy. There is no doubt that West Cameroon is a basically agricultural country, depending for its livelihood, and relying for its wealth, on the export of agricultural commodities. However much industrialization takes place in the future, it will not affect the future of West Cameroon as a country basically devoted to agriculture. For this reason, the education of the bulk of our citizens must be directed, not only to providing a basic academic edu-

Ministry of Education and Social Welfare, *West Cameroon Education Policy: Investment in Education*. Buea: West Cameroon Government Press, 1963, pp. 1-8.

cation, but to supplementing it by an education in rural science, which will enable them to be better and more efficient farmers, and consequently to contribute towards the greater wealth of the economy. *Our Society:* The second general consideration is to examine the fabric of our society. Our society possesses a treasure of traditional arts and crafts, and a wealth of songs and dances of the folklore tradition, best suited to a predominantly rural society. No policy for education, Cameroonian in taste and character, can be complete without giving full encouragement to our cultural heritage.

Political Considerations: The third general consideration is political in the wider sense of the term. In October, 1961, the former Southern Cameroons reunified with the Republic of Cameroon, and became the Federated State of West Cameroon, in accordance with Federal Constitution. By this step, the English-speaking West Cameroon became a partner of the French-speaking East Cameroon in the Federal Republic of Cameroon. This creates the need for a complete rethinking of our educational policy, since not only language, but culture, tradition and way of life are different in the two sectors of the Federal Republic—the Federated State of West Cameroon and the Federated State of East Cameroon. The implementation of Article 1 of the Constitution, that the official language of the Federal Republic is English and French, automatically raises the question of bilingualism.

Bilingualism: Although West Cameroon is by far the smaller of the two Federated States, having only one-quarter of the population of the Federated State of East Cameroon, it is obvious that the task of teaching its 800,000 inhabitants (1953 Census) a second language (French) is a colossal one, especially when one considers that English in West Cameroon is itself the second language, after the local language, which is acquired from birth. Furthermore, after 40 years of Trusteeship under the United Kingdom Government, the second generation of English-speakers has now arisen amongst a solid nucleus of West Cameroon citizens. With the spread of education, and the solid foundation of English, the British way of life, its culture and tradition especially in the fields of law and order, justice and parliamentary tradition have taken firm root. For this reason, the introduction of a second foreign language is a subject to be treated with great care. In the opinion of Government, French should not be taught to persons who have not acquired a solid foundation of English, as this would lead to a maladjustment, and might well result in

Pidgin becoming the lingua franca of a large section of the population, who had started on the road to English, learnt it in a small degree, and had then become diverted to the learning of French. It would be a great pity if, at a time when the countries of Africa are beginning to introduce French or English, where one of these did not formerly exist, the solid foundation of English in West Cameroon should be in any way undermined. Government feels, therefore, that no purpose at this stage would be served by introducing French in primary schools.

In secondary schools and teacher-training colleges, Government feels that French should continue to be a compulsory subject and should be supplemented by Audio-Visual teaching and exchange visits. In post-secondary institutions, Government feels that an intensive study of French should be undertaken, providing it does not detract from the necessity to learn English in its highest manifestations. Generally, Government feels that the unique position of the Federal Republic of Cameroon as a bilingual country should be safeguarded even if, as in Canada and Switzerland (for example) this meant in practice, that the two languages exist side by side, to begin, but not together. At the same time, by the teaching of French in secondary and post-secondary institutions, more intensively, and by more frequent social contact with the citizens of East Cameroon, a graduated bilingualism will result, by conscious and unconscious means. This will lead, in the final analysis, to a full bilingualism, springing on one side from a basis of French and on the other side from a basis of English.

Structural Harmonisation: The question of bilingualism and the introduction of a second foreign language at the secondary and post-secondary level does not in any way affect the harmonisation of structures of the two educational systems. Unification implies a unified system of education, although Article 1 of the Constitution implies a duality of official languages. For this reason, Government does not object to, and in fact welcomes, such measures as will promote a unity of the two structures of education. The length of courses, the beginning and ending of the academic year, the dates of holidays, (even the basic aims of education in the context of the Federal Republic as a basically agricultural nation)—all these and other structural details can easily and should be harmonised.

Religious Considerations: The fourth general consideration is of a religious nature. In speaking of the basic aims of education, it should

not be overlooked that, in West Cameroon, the educational system has been carried out, with the express wish of the West Cameroon Government, mainly by the religious Voluntary Agencies. The idea has always been to produce an educated person of sound moral and religious background, and Government reiterates its wish for the continuation of this aim. Government wishes this section in the 1955 policy on education to be repeated—"Government appreciates the fundamental influence of sound religious training in the formation of character and it is our intention to see that religious instruction takes its rightful place in the curriculum of all schools." In defining the term "religious instruction," Government emphasises that this does not necessarily mean Christianity. It firmly holds to the belief that education should be open to all, irrespective of race, class, creed, colour, or religion. Further, this does not mean the compulsory attendance of non-believers in classes teaching scripture, nor does it exclude the possibility of non-Christian Schools.

In view of the policy to give religious instruction in all schools, the teaching of religion is undertaken in all West Cameroon Government educational institutions. This is not the case in Government institutions in East Cameroon. Government recommends that when Federal Government educational institutions are introduced in West Cameroon, religious instruction should form a part of the curriculum. *Co-ordination and Consultation with Federal Education Authorities:* In view of the problems caused by the juxtaposition of the two languages, cultures and traditions, and in view of the strong dominance of religious Voluntary Agencies in the practice of education in West Cameroon, there must be the closest collaboration, consultation and co-ordination between the Ministry of Education of the Federated State of West Cameroon and the Federal Ministry of National Education. Failing this, the delicate task in hand can easily take the wrong course, to the detriment of both the Federated State and the Federal Republic.

POLICY FOR PRIMARY EDUCATION

The crux of the primary school educational problem resides in the training of teachers. Numerically, the primary school population has increased from 44,566 in 1955 to 95,159 in 1962. Within this time, the number of schools has increased from 358 in 1955 to 590 in 1962. The number of boys has almost doubled from 35,516 in 1955, to 67,454 in 1962, and the number of girls has more than trebled, rising

from 9,050 in 1955 to 27,705 in 1962. This is an encouraging sign for, as the saying goes, he who educates a girl, educates a family. Unfortunately, the number of trained and certificated teachers in primary schools has not kept pace with the numerical expansion in school enrolment and government now intends to throw its full weight behind the training of teachers to redress the balance. At December 31st, 1962, the number of certificated teachers in West Cameroon primary schools was 1,058 (or 33.5%), out of a total teaching population of 3,157. Of the total enrolment, only 332 were female teachers, which is just over 10%, compared with the total female school enrolment of 29%. It is obvious, therefore, that not only must more Teacher-training Centres be opened, but more encouragement must be given to the employment and training of female teachers. This aspect will be dealt with more fully in the Policy for Teacher-Training. It will suffice to mention here that Government's policy is to have 100% trained and certificated teachers in West Cameroon primary schools by 1970. Maximum enrolment per class will continue to be 40.

Primary School Buildings: Wastage and repetition arise in primary schools partly because of the lack of trained teachers and partly because of the lack of suitable classrooms and equipment. Government intends to assist communities and Voluntary Agencies to improve buildings by giving out building grants, and, as evidence of this intention, the sum of 10,000,000 Francs CFA has been placed in the Draft Estimates of 1963/64 for approval by Members of the House of Assembly. This is a start towards the problem of primary school buildings, and it is intended that grants to schools shall be small but numerous, and given to communities which have already done something to help themselves. They will supplement, but will in no way replace, existing efforts.

Structural Harmonizations: The academic year will in future begin in September and end in June, to harmonize with secondary school and university terms. This will be achieved by September, 1964. The primary school academic course will be reduced to seven years from 1963, and to six years from 1965. This is in order to intensify the teaching of rural science and manual handicrafts for boys and domestic science for girls at the end of the six-year academic course, of which more details are given below.

Avenues to further Education: Government intends to increase the avenues to further education by opening more secondary schools of

the type already in existence, using statistical data as the means of planning, and to diversify the types of education offered by opening farm institutes, technical and vocational schools, domestic science centres and commercial schools. This will mean that primary school pupils who are gifted academically will pass to secondary schools, whilst those talented in farmwork or artisan skills will pass to Farm Institutes, Farm Schools, Technical or Vocational Schools, and those with commercial aptitudes to Commercial Schools. It is likely that the West German Commercial School will open in September, 1964. For girls, Domestic Science Centres and Vocational Schools for Girls will enable those who do not wish to follow a secondary course or become teachers to follow courses in cookery, needlework, and general housecraft.

Bilingualism: It is not proposed to hasten the introduction of French in primary schools. It is felt more suitable to intensify the teaching of French in post-primary institutions until such time as the teacher-training colleges turn out sufficient teachers qualified in French to permit the gradual and harmonious placing of French on the primary school syllabus. The bulk of the primary school population, who will be farmers, will not have the same use for French, in the first instance, as the urban commercial and civil service group.

Universal Primary Education: Government's target remains the provision of universal primary education. From statistical data, one can project primary school enrolment up to 1966, and it is estimated that the future enrolment, based on the 1962 status quo, will be as follows:

1962	95,000
1963	105,000
1964	120,000
1965	135,000
1966	150,000

By 1970, the target of universal primary education will be reached without further stimulus, unless there is a birth population explosion. *Conditions of service of Primary School Teachers:* Whilst Government is deeply appreciative of the work of the primary school teacher, the resources of the economy must be thoroughly examined before Government is committed to improvement in the salaries and conditions of service of teachers. With only 33% of the total number of

teachers certificated as at December, 1962; with the policy of having 100% trained and certificated teachers by 1970; and considering that 257,000,000 Francs CFA were expended in the financial year 1962/63 on primary school grants-in-aid, it is obvious that due care must be taken before salary awards can be made to as large a body as the teachers. It is, however, Government's intention and earnest desire to invest in education to the limit of its financial resources, and teachers, whilst exercising patience, because of the magnitude of the financial commitment involved, must not abandon hope. Whilst not overlooking the cost-of-living aspect. Government must strive to place the incentives in the right places. Fortunately, the West Cameroon Union of Teachers and the Joint Consultative Council exist as the negotiating bodies for the primary school teachers, and are available for discussions when some preliminary studies of the salary and wage structures have been undertaken. An early statement on teachers' salaries will be made. Teachers' retiring benefits are already guaranteed.

General Outlook for the Future: The pattern of the future will be that of the seven, then the six-year course, starting in September and ending June, seven, then six years later, with the teaching staff all certificated. By a higher standard of teaching, the compression of the eight-year academic course will not result in any lessening of the knowledge received, and will have the advantage of making available, at an earlier age, primary school children for further training. For example, a bright student would be able to take his G.C.E. (O. level) at the age of 16 or 17, his G.C.E. (A. level) at 18 or 19, and have his University degree at the age of 21, 22 or 23. He is then available to serve his country for 34, 33 or 32 years until the age of 55. The State's investment in his education would have then been more than justified.

POLICY FOR SECONDARY EDUCATION

Government's policy for secondary education is to make available places for all primary school children who are able to benefit by further academic education. It is difficult to estimate the extent to which wastage and repetition are evident in the movement of school children from class to class, but taking 5% of those eligible to sit the secondary school examination each year (that is, the Standards V and VI classes), as a desirable target to aim at, it would seem

that in 1962, 510 places for new entrants in secondary schools should have been available, as compared with actual places available numbering 300. If one place for every 20 Standard V and Standard VI pupil is to be made available in secondary schools by 1965 (which is a desirable target) the total number of secondary school places open to new entrants by 1963 should be 985, or, allowing for wastage and repetition, at least 750 places. This would postulate between 10 and 14 secondary schools by the end of 1965, counting 70 (double-stream) new places per school. This in turn, postulates between 4 and 8 new double-stream secondary schools within the next three years. It is certain, therefore, that a fairly rapid expansion is necessary and desirable. Actual planning of future locations will have to take into account the statistical data recently produced, and the locations of existing schools, as well as the requisite proportion of boys to girls, even in the context of mixed secondary schools.

Bilingual Secondary School: In September, 1963, the Federal Bilingual Grammar School will open at Man O War Bay, Victoria, pending construction of the permanent structure at Buea, during the dry season of 1963, for transfer during the course of 1964. This school is somewhat in the nature of an experiment, and is an attempt at bilingualism in practice. The staff will be of Cameroonian, British and French nationalities, and the students will be equally divided between East and West Cameroon.

Structural and Syllabus Harmonizations: School terms and school holidays will be harmonized so that they correspond approximately in both sectors of the nation. The school term will begin in September and end in June. Secondary schools in West Cameroon will continue to follow the West African School Certificate and then the G.C.E. syllabus (in 1964) until such time as an internationally recognised equivalent Cameroon Certificate of Secondary Education is evolved, which can be taken in both the English and French languages.

Co-existence of Government and Voluntary Agency Secondary Schools: Non-denominational schools at present provide education for about 14% of the total primary school population, and it is clear that a number of Government secondary schools are needed to balance against the present monopoly of secondary education by the Voluntary Agencies. Government's policy is to allow the two to co-exist peacefully—on the one hand recognising the value of religious Voluntary Agency secondary schools, which Government holds in

the highest esteem; on the other hand recognising what the skill and resources of Government are capable of achieving backed by the generous assistance of friendly foreign nations.

Place of Religion and Development of Secondary Schools: Government recognises the value of religious instruction to school children, granting the right of non-believers not to participate in scripture lessons according to their conscience, and would endeavour to ensure that religion forms a part of the curriculum of Government secondary schools. In consideration of the need to ensure the success of the College of Arts and Science, and to guarantee a combined and concentrated effort for Advanced level secondary education, Government has restricted the secondary schools to a five-year course. Government will relax this restriction when the reason for its existence is no longer present.

Junior Secondary Schools: Government is seriously considering the possibility of introducing a type of secondary modern school which would provide a course of three years secondary education followed by two years commercial education. The advice of the U.N.E.S.C.O. Planning Group on this subject will be sought on their arrival in West Cameroon shortly.

Secondary Technical Education: Government's policy is to encourage development of Ombe Trade Centre to the status of a full Technical Institute, enabling students who are capable of proceeding beyond the present level of the artizan grade to proceed to the entry standards required for a Diploma or Degree in the technical subject of their choice. Government will encourage the development of lower grade technical vocational schools. The possibility of introducing these schools is under active consideration and expert advice from the U.N.E.S.C.O. Planning Group will be sought, on their arrival in West Cameroon.

POLICY FOR TEACHER-TRAINING

A policy for teacher-training is inevitably and inextricably linked with a policy for primary education. Given the target of universal primary education, and the target of 100% trained and certificated teachers in primary schools by 1970, it is possible to state quite clearly that the avenues for the training of teachers must be further extended. Statistical data, the basis for all sound and efficacious planning, reveal that, at present, the Grade III teacher-training institutions contain a capacity, when fully extended, of producing 360 Grade III

teachers per annum, and the 180 Grade II teachers per annum. It is also clearly revealed, that to achieve a target of 100% trained and certificated teachers per annum, a total of 600 teachers Grade III, and 300 teachers Grade II must be produced annually as soon as possible. This postulates the establishment of four more Grade III and two more Grade II centres immediately, and the extension of existing centres to full double-stream capacity. Among these must be at least one Government Grade II centre, capable of extension to provide a Grade I course.

Re-organisation and Replanning of Grade III and Grade II Centres: After some years, when the output of trained teachers has overhauled current demands, Government proposes a fairly radical re-organisation and replanning of teacher-training. Bearing in mind that the products of the primary schools will be available for further training earlier on account of the reduced primary school course, Government proposes, when the propitious moment is reached, to merge into one unit the present Grade III and Grade II Colleges, so that, instead of two broken periods of three, and then two, years teacher-training, a single five-year course takes its place.

Secondary syllabus for teacher-training colleges: The merging of present Grade III and Grade II courses to form a single five-year course will enable candidates for the teaching profession to increase their knowledge in addition to learning the theory and practice of teaching, as Government proposes to reorganise the syllabus so that the teachers of the future would follow the secondary syllabus for the first three years and then take the two years course in teacher-training. This would have two advantages—it would open the avenue to the secondary course to a large number of primary school children, and it would enable the secondary school boy, on completion of three years at secondary school, to become a teacher by moving across to a teacher-training college for the last two years teacher-training.

Grade I Teacher-Training Colleges: It is the policy of Government to provide, in West Cameroon, the one-year's course for Grade II teachers leading to the Grade I Certificate, which at present can only be taken abroad. To this end, Government intends to re-establish a Grade II teacher-training college and develop it, ultimately to become a combined Grade II Grade I College. The possibilities of external aid for such a project are not remote.

At the same time, when the Grade III and Grade II Colleges are merged to form a single five-year course based on the first three years

of the secondary syllabus and two years of teacher-training, the possibility is being explored of creating a new type of Secondary Teachers Training College, designed to produce teachers for the junior classes of the secondary schools. This type of college would take boys and girls who have completed three years of secondary education, and give them the last two years of the secondary course, then two further years of teacher-training. Alternatively, holders of the G.C.E. (O. level) or its equivalent, could enter after the second year, and follow the last two years of teacher-training. With the proposed expansion of secondary education, and the present lack of Cameroonians available for teaching in the secondary schools, this type of college should fill a long-felt want. If the activities of the College of Arts, Science and Technology are diversified on the lines of the models in Nigeria, with which we are more familiar, there is a possibility that the teacher-training aspect of this training could take place there. University graduates, of course, are required for the higher classes of the secondary schools.

POLICY FOR HIGHER EDUCATION

At the moment, the College of Arts and Science is not, strictly speaking, an institution of Higher Education, within the U.N.E.S.C.O. definition of the term. It is Government's policy, with the assistance of the U.S. Government, to develop the College of Arts and Science in breadth by the addition of Technology and in length by developing it to be a decentralised College of the Federal University of Cameroon, offering subjects that lead to the Intermediate examination of the Federal University.

PLANNING AND INSPECTION REQUIREMENTS

Government recognises the need for forward planning by means of statistical data, man power studies, and standing Committees to examine general and specific educational problems arising from our reunification, and welcomes the assistance offered by Governments of friendly foreign nations and international bodies in the field of forward planning. Government policy is to retain close links with educational institutions by maintaining Education Offices throughout the country. In this respect, Education Offices now exist at Buea, Kumba, Mamfe, Bamenda, Wum and Nsaw and it is hoped to instal other offices at suitable places such as Victoria and Nkambe in the future. It is hoped also to produce further statistical data on

the lines of the Education Department statistics, extended in scope and size. The assistance of friendly foreign nations in the way of personnel, equipment and buildings is also welcomed. The assistance of the U.S. Peace Corps Volunteers has been most valuable, and more are expected this year.

PATTERNS OF THE FUTURE

From the aforementioned descriptions of the policies for primary, secondary, technical, commercial, vocational, and higher education, and the account of future patterns of teacher-training it will be observed that the citizen of the future will be plunged, early in life, into a short course of primary academic education, diversifying into subsequent fields of his choice, determined by his aptitude and talents, leading if he is capable to the apex of a pyramid on which stands the Federal University of Cameroon, a bilingual unity in diversity. Government hopes, by wise planning, to reap rich dividends from the investment in human material, which is education.

12-4. A large nation's charge to an education commission

"The attempt to create a new social order can succeed only if the traditional educational system [is] revolutionized both in content and extent."

INDIAN GOVERNMENT RESOLUTION

Few nations have applied themselves more diligently to educational planning than India. Shortly after independence she set about surveying the educational scene to determine appropriate courses of action. Two earlier studies especially valuable in helping to determine Indian educational policy were The Mudaliar Commission report, which studied in depth secondary education, and the Radhakrishnan Commission report, which examined university education. Further, the five-year

plans of India have given prominence to education's role in the total development of the country, and an education representative sits as a permanent member of the planning commission.

Now India takes a significant new step in educational planning. A new commission, chaired by the Chairman of the University Grants Commission, will study national education at all levels in India. Its work will be broad in scope, and its charge is to "advise the Government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all aspects."

The decision of the Indian government to undertake this major study of education is noteworthy for two reasons. First, it is noteworthy that a major government that has applied itself well to educational planning regards it as important to continue to plan. India's experience suggests the need for continuous analysis and appraisal of education particularly in a country undergoing rapid change. As we stated in the introduction to this part, educational planning does not end with a plan. The plan is only the beginning.

The second reason the Indian action is of special interest lies in its choice of a commission, rather than an established planning agency, to conduct the survey. Educational survey commissions in recent years have assumed key significance in educational planning. The products of their work frequently become the bases for far reaching educational plans and programs. Using a commission for this purpose, the government is able to secure topflight people who can serve for the period of the study, be relatively objective about their work, and in the process of conducting the study help to educate the country about its educational problems and some of the possible solutions to them.

The following is the text of the Indian Government resolution announcing the appointment of this Education Commission.

[*Indian Government Resolution*]

Text of the government resolution

The following is the text of the government resolution announcing the appointment of the commission:

The Government of India, ever since the attainment of independence has given considerable attention to the development of a national system of education routed in the basic values and the cherished traditions of the Indian nation and suited to the needs and aspirations of a modern society. While some advance has been made in these directions, the educational system has not generally evolved in accordance with the needs of the time, and a wide and distressing gait continues to persist between thought and action in several sectors of this current field of national activity.

In view of the importnat role of education in the economic and social development of the country, in the building up of a truly democratic society, in the promotion of national integration and unity and above all in the transformation of the individual in the endless pursuit of excellence and perfection, it is now considered imperative to survey and examine the entire field of education to realise within the shortest possible period a well-balanced, integrated and adequate system of national education capable of making a powerful contribution to all spheres of national life.

The attainment of independence ushered in a new era of national development founded upon: the adoption of a secular democracy, not only as a form of government but also as a way of life; the determination to eliminate the poverty of the people and to ensure a reasonable standard of living for all, through modernisation of agriculture and rapid development of industry; the adoption of modern science and technology and their harmonising with traditional spiritual values; and the acceptance of a socialistic pattern of society which will secure equitable distribution of wealth and equality of opportunity for all in education, employment and cultural advancement. Greater emphasis came to be placed on educational develop-

ment because of the realisation that education, specially in science and technology, is the most powerful instrument of social transformation and economic progress and that the attempt to create a new social order based on freedom, equality and justice can succeed only if the traditional educational system was revolutionised both in content and extent.

Quantitatively, education at all levels has shown a phenomenal development in the post-independence period. In spite of this expansion, however, there is widespread dissatisfaction at several aspects of educational development. For instance, it has not yet been possible to provide free and universal education to all children up to 14 years of age. The problem of mass illiteracy continues to be immense. It has not been possible to raise standards adequately at the secondary and university states. The diversification of curricula in secondary and higher education has not kept pace with the times so that the problem of educated unemployment has been intensified on the one hand while on the other, there is an equally acute shortage of trained manpower in several sectors. The remuneration and service conditions of teachers leave a great deal to be desired, and several important academic problems are still matters of intense controversies.

QUALITATIVE IMPROVEMENTS

In short, qualitative improvements in education have not kept pace with quantitative expansion, and national policies and programmes concerning the quality of education even when these were well-conceived and generally agreed to, could not be implemented satisfactorily.

The Government of India is convinced that education is the key to national prosperity and welfare and that no investment is likely to yield greater returns than investment in human resources of which education is the most important component. The Government has also decided to mobilise all the resources of science and technology which can be done only on the foundation of good and progressive education and, to that end, to increase considerably their total investment in the development of education and scientific research. The nation must be prepared to pay for quality in education, and from the value attached to education by all sections of the people it is clear that they will do so willingly.

It is desirable to survey the entire field of educational development as various parts of the educational system strongly interact and influ-

ence one another. It is not possible to have progressive and strong universities without efficient secondary schools and the quality of these schools is determined by the functioning of elementary schools. What is needed, therefore, is a synoptic survey and an imaginative look at education considered as a whole and not fragmented into parts and stages. In the past several commissions and committees have examined limited sectors and specific aspects of education. It is now proposed to have a comprehensive review of the entire educational system.

While the planning of education for India must necessarily emanate from Indian experience and conditions, the Government of India is of the opinion that it would be advantageous to draw upon the experience and thinking of educationists and scientists from other parts of the world in the common enterprise of seeking the right type of education which is the quest of all mankind, specially at this time when the world is becoming closely knit together in so many ways. It has, therefore, been decided to associate with the commission, either as members or as consultants, some eminent scientists and educationists from other countries.

TERMS OF REFERENCE

The commission will advise the Government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all its aspects. It need not, however, examine the problems of adult, medical or legal education, but such aspects of these problems as are necessary for its comprehensive inquiry may be looked into.

The commission will submit its final report as early as possible and not later than March 31, 1966. Where immediate implementation of certain programmes is necessary, the commission may also submit, from time to time, interim reports dealing with limited sectors or problems of education. The Government is anxious that the implementation of agreed recommendations about specific matters of importance shall on no account be held up until the completion of the commission's work. On the other hand, its expert advice and guidance should be continuously available to those charged with the responsibility of implementing educational programmes and policies.

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chapter 13

Issues Confronting Educational Planners

13-1. Education in the total development plan

"Should schools be favored over power plants?"

DAVID E. BELL

The recent emphasis upon placing educational development within the context of national development planning, and especially of economic development planning, has raised a host of issues, not the least of which relate to the adequacy of current economic development theory and concepts for guiding decisions on educational matters that are to form part of the national development plan. The recognition that sums allocated to education are not to be regarded merely as consumption but should also be viewed as paying investments does not solve the planning problems that arise from suddenly giving schools a status comparable to power plants or steel mills. When it comes to the hard test of applying theory and theoretical criteria in allocating resources, the divergencies between educational investment and more usual capital investments are certainly as great as are the similarities. When, as this volume has amply illustrated, the social gain from education must be calculated in terms of non-economic goals, the

proportions of the problem appear all the more staggering.

On the basis of Pakistan experience David E. Bell illustrates both the potentialities and problems of placing educational development within the context of general allocation theory and requiring educational claims to meet the same objective criteria. Fully recognizing problems that arise from lack of commensurable returns, from currently inadequate data and from the need to reconcile divergent objectives, he is by no means pessimistic in his conclusions on the applicability of general allocation theory to educational planning. With the heavy reliance on mathematical expression in current economic theory, however, perhaps one of the most serious challenges to the placement of expenditures on education as an input factor in economic theory is made explicit by the author when he asks: "If we cannot measure the efficiency of a proposed educational project in some quantitative fashion, have we a transferable set of standards that can be used by different persons under different circumstances to obtain verifiable results? Or have we instead only a logical and persuasive verbal formulation, whose application will depend on the judgment of the person using it?"

[David E. Bell]

Economic planning staffs have been established by now in most of the underdeveloped countries. One of the most important questions with which these staffs are faced is how best to allocate the resources that are available for development. Which industries should be started? What should be the priority of investment between agriculture and industry? Should schools be favored over power plants? . . .

David E. Bell, "Allocating Development Resources: Some Observations Based on Pakistan Experiences." Reprinted by permission of the publishers from Carl J. Friedrich and Seymour Harris, editors, *Public Policy: A Yearbook of the Graduate School of Public Administration Harvard University*, volume IX, pp. 84-92, 106. Cambridge, Mass.: Harvard University Press, Copyright © 1959 by the President and Fellows of Harvard College.

Elements of allocation theory

It is necessary to begin by mentioning, in somewhat simplified fashion, the essential elements in the theory of allocation usually suggested by economists. They are two. The first is the idea of *efficiency*—of choosing from among the available alternatives those investments which will result in the maximum progress toward the country's development objectives. The second is the idea of *consistency*—of choosing a set of investment projects in which inputs and outputs are balanced and all scarce factors are fully committed. Put the two ideas together and one pictures the planners as calculating costs and returns for alternative projects in the different fields of developmental activity (and for alternative technologies for those projects where there is a choice) and selecting that set of projects which is at once mutually consistent and most efficient in producing economic growth. . . .

These ideas appear to be simple and powerful, capable of being explained to politician and public as well as technical expert. They would seem to offer an objective standard by which a development program can be determined and defended without recourse to fallible personal opinion.

The Pakistan experience offers some confirmation and some challenge to these assumptions. The ideas of efficiency and consistency were explicitly adopted as the basic criteria for choosing projects for inclusion in the Pakistan Plan. They were found to be relatively easy to explain, and proved acceptable to nearly everyone concerned as a conceptual basis for decision-making. In practice however they could be applied only with major limitations.

Three main difficulties are discussed briefly in the present paper. First, the theory does not yet seem to offer a satisfactory basis for allocating resources to purposes where no marketable product is involved. Second, lack of data sharply limited the extent to which the efficiency criterion could be used. Finally, in view of both these difficulties, it was not possible to achieve an objective solution to the problem of multiple objectives.

These are serious limitations. It might be well to state at the outset however that the final conclusion was by no means a negative one. Even in the Pakistan case the allocation theory was of considerable value. And in large part the limitations encountered in the Pakistan

case could be removed by appropriate programs of research and investigation. Nevertheless there remain some doubts that the theory will serve the needs of planning agencies without considerable further development.

The problem of incommensurable returns

To apply the allocation theory requires the calculation and comparison of net returns from alternative investments. The first major limitation in the use of the theory is that no such calculations are possible with respect to a good many elements of a development program.

The difficulty arises in two ways. One is that capital investment in many cases—roads, schools, hospitals, for example—results in no marketed product. It may be possible in a few instances to impute a value to the output. But in a great many cases it seems rather doubtful that monetary returns on such investments in “social overhead capital” could be calculated, for comparison with the return on alternative investments in, say, shipyards or rayon plants.

A second way in which the difficulty arises is that to a considerable extent the allocation process—at least as practiced in Pakistan and India—is concerned with activities which are not investment at all, in the customary economist’s meaning of a net addition to physical assets. The Pakistan Five Year Plan, for example, includes proposals to expand the agricultural extension system, to begin a series of comprehensive surveys of water resources, to enlarge the geological survey organization, to increase the staff of the national industrial research organization, to hire more teachers in schools and colleges, and to do many other things the essential characteristic of which is the provision of services, not the construction of assets.

These activities obviously do not fit neatly into the standard allocation theory which is concerned with choices among alternative capital investments. The economist’s first question will therefore be: must we include such activities in a development program? The services of teachers, researchers, and extension agents are normally classified by economists as consumption, not investment. Could we not simply ignore them, and restrict the scope of development planning to the planning of investment?

There may well have been uncertainty in the past about how to answer this question, but evidence of two kinds seems now to give

a definite answer. First, the productive possibilities of increased educational or research services have been noted in many underdeveloped countries. In Pakistan, to take only a single example, the introduction of hybrid corn increased the yield on some farms near Peshawar by upwards of 60 per cent in one year. In such circumstances, the training of additional agricultural extension agents might well result in a larger growth in national output and income than any alternative use of resources. Those concerned with planning economic development would therefore seem to be required to deal with what might be called "developmental services," as well as with capital investment.

Second, it is by now well established that past gains in production in advanced countries have come as much from increases in the quality of labor and capital inputs as from increase in their quantity. Although we know little about how to accomplish desired changes in the quality of factors, it would seem likely that research, education, extension services, perhaps even health services, would have some relevance—indeed as we learn more about economic growth we might well find that to plan wisely the expansion and improvement of these services might be at least as significant for a country's progress as to plan its capital budget.

For these reasons, the decision by planning authorities in Pakistan, India, and other countries, to concern themselves with these "developmental services" seems well founded.

In the case of most of these developmental services, as in the case of the construction of schools and roads, no market price attaches to the result. In consequence, over a considerable range of services and investments included in a development plan like that of Pakistan, quantitative comparisons of relative efficiency of resource use are not easy to make. These are not small fringe areas, but substantial and important segments of the plan. While no precise estimates were made in the Pakistan case, activities of these types might account for as much as one-fifth of the total outlay proposed under the Plan. How could allocations be made in these cases?

What was actually done in Pakistan (and presumably in other countries facing the same problem) was to seek bases for judgment which would be defensible by rational argument though not by objective tests. Two questions required answers. First, given the total resources available for development purposes, how much should be allocated to education, to health, and to each of the other sectors of the Plan? Second, given the allocation to each sector, how should

it be sub-allocated among purposes and projects? In the standard allocation theory, both questions are answered simultaneously as projects within a sector are compared with each other and with projects in other sectors. As the margin is approached, the allocation among sectors, and among projects within sectors, is uniquely determined. In the absence of quantitative data, other methods are necessary.

As an illustration, the allocations to education in the Pakistan Plan might be cited. Allocations were made *within* the education sector to a series of major sub-sectors (primary education, secondary education, teacher education, etc.), and within those subsectors to scores of individual projects (the establishment of new teacher training colleges, the improvement of existing training colleges, the commencement of research on teaching materials, etc.) These allocations were made by the Planning Board on the recommendation of its small but expert Education Section. The Section made its recommendations following a careful survey of the situation of the schools and colleges, a review of the many studies that had been prepared in previous years, and extensive consultation with the country's educational leaders. Each of the hundreds of projects which were proposed by different governmental (and some private) agencies was analyzed. Recommendations were made not only on all these projects, but also on many policy issues having to do with educational methods, organization, financing, etc.

This was work of great range and detail. The Section early formulated, however, and the Board adopted, a statement of "priorities" which was intended to furnish a clear basis for decision in individual cases. These priorities were stated explicitly and with some precision. For present purposes, only two excerpts will be quoted. The formal rationale underlying the priorities was stated as follows: "the priorities were designed, first, to obtain maximum results from the use of scarce resources; second, to ensure as perfect an integration as possible of the educational plan with the general development Plan; and third, to achieve an equilibrium within the educational plan itself." The priorities themselves were summarized as follows: "It is necessary first, to consolidate, that is, to fill up the gaps and make up the qualitative deficiencies that exist in the present educational structure and secondly, having regard to the resources available, to make a modest expansion in the system."

This statement of priorities formed the basis for hundreds of spe-

fic decisions, large and small. For example, in the field of primary education, the important (and highly controversial) recommendation was made that, even though only about half the children of primary school age were in school, resources during the First Plan period should be devoted mainly to improving teacher training, teaching materials, and other quality factors, rather than to expanding the number of schools and teachers offering the existing standard of education. The justification for this recommendation was clear: it was considered that the greater educational impact on the country's children could be obtained in this way, foregoing a poor education for some children in the short run in the interest of a better education for many more children in the longer run. For another example: proportionally greater resources were allocated to technical and professional education, and to secondary education, than to primary or to college education. The justification was that the deficiencies in the system were relatively larger in the favored fields, and the urgency of improvement therefore greater—a judgment which could perhaps be translated as a distribution of resources designed to yield the greatest educational return per unit of expenditure.

To a close observer it seemed evident that the educational planners made extensive use of the concept of allocating resources to what were judged to be their most efficient uses, and of the concept of selecting projects which would be consistent both with each other and with the rest of the development program. An argument might be made therefore that the criteria of selection used in the education sector were essentially the same as those used in industry, or power, or agriculture.

Two considerations, however, greatly reduce the potential impact of such an argument. Even granting that the general criteria of efficiency and consistency are conceptually applicable in a sector like education, does this advance us very far, so long as the criteria have to be applied by subjective judgment rather than objective measurement? If we cannot measure the efficiency of a proposed educational project in some quantitative fashion, have we a transferable set of standards that can be used by different persons under different circumstances to obtain verifiable results? Or have we instead only a logical and persuasive verbal formulation, whose application will depend on the judgment of the person using it?

Furthermore, in so far as the educational planners were seeking to apply a criterion of efficiency, their object was efficiency in achiev-

ing educational results. This is clearly a different thing from efficiency in achieving national income results, though there may well be some (as yet unknown) functional relationship between the two. To this extent the criterion of efficiency is not comparable in application to the education sector and to sectors with marketable products.

In spite of these considerations, the writer was, and remains, impressed by the apparent logic and force which characterized the pattern of allocations within the education sector in the Pakistan First Plan. . . .

Conclusions

The conclusions warranted by the foregoing discussion would appear to be these:

1. The theory ordinarily suggested by economists for allocating development resources does not serve the full needs of planning agencies, which must deal with investments and services that do not have marketable products. The ideas of efficiency and consistency which underlie the theory may hold promise of application to such allocation problems. Both empirical research and theoretical analysis are needed to investigate the problem further.

2. The allocation theory requires, for application to choices where marketable products are involved, a range of data vastly in excess of that available in most underdeveloped countries. Years of energetic and wisely directed effort would be needed in any country to obtain the needed information. Such an effort would seem to be itself a high priority use of scarce resources.

3. The methods suggested by the theorists for reconciling the divergent objectives of development programs cannot be fully used in practice because of conditions 1 and 2 above. As these conditions are progressively overcome, the extent of conflict among objectives will become clearer, and the political choices necessary to reconcile conflicts may be more sharply posed.

13-2. Priorities within education

"A basic question is that of striking a proper balance between the various sectors of education."

JOHN VAIZEY

The following selection by John Vaizey analyzes three crucial problem areas for educational planning: those of *balance*, of *inappropriate structure*, and of *teacher supply*. The problem of balance is a delicate one, frequently rendered more difficult by emotion, traditional loyalties, and local interests. When the question of balance between regions or between rural and urban education is an issue, it is only too often apparent that "what may be economically desirable is not always politically possible." Similarly, striking the economically appropriate balance between technical education and liberal education, or between education for men and education for women, may run athwart strong social barriers of fixed conceptions concerning the very nature of education.

The problems that arise from an inappropriate structure, frequently either modeled on that of a former colonial power or reflecting an earlier colonial orientation, are often even more emotionally charged. The fruitless allegiance and single-minded adherence to inherited "standards," as in the case of the rallying ground of equivalence in former French territories, has too often blinded educational planners to the tragic economic (and personal) consequences of wastage in terms of school dropouts and has yet more often diverted the application of their intelligence from creating educational structures that would give adequate recognition to the intermediate and presently appropriate levels of qualified skilled personnel, as the author here urges.

Finally, the brief selection that follows does much to

shed light on the problem of *teacher status and supply*—undoubtedly the central problem in the development of education. The nature and degree of this problem varies from one underdeveloped land to another: from countries where less than one half the primary school teachers have finished primary school themselves to lands where large numbers of graduates prefer unemployed or underemployed poverty to joining the ranks of a low-status profession or accepting employment away from the bright lights and attractions of the city. In the face of the almost universal lip-service paid to the need for expanding and improving teacher training, the relatively low priority given to staffing and financing pre-service and in-service teacher education programs remains a major roadblock in the path of long-range development.

[John Vaizey]

The structure of education

A basic question which arises in connection with the structure of education is that of striking a proper balance between the various sectors of education, or between various regions of a country.

In the Declaration of Human Rights the right of all children to free primary education suggests how powerful are non-economic judgements in education; to provide this education expenditure must be greatly increased. An economist, however, may point out that a better use of resources might result from a prior strengthening of other sectors of education. In one respect at least the educator would agree with him: if primary education is to be extended without a worsening of pupil/teacher ratios, there must be a big increase in the output of teachers which in turn calls for a corresponding increase in secondary education. In Portugal, for instance, the present rate of output of teachers would have to be quadrupled in order to achieve within ten years the aim set out in the Portuguese law of providing

John Vaizey, "Some of the Main Issues in the Strategy of Educational Supply," Policy Conference on Economic Growth and Investment in Education, III (Paris: Organisation for Economic Cooperation and Development Publications, Feb. 1962), pp. 55-65.

for every child six years of compulsory education. It can thus be legitimately argued that teacher training and the strengthening of secondary education must inevitably precede any substantial development of primary education.

Problems of the same nature can arise in deciding whether to extend technical or general education.

Somewhat different is the problem of regional imbalance. Most countries have their highly developed areas and their backward areas. In Pakistan there is the contrast between West Pakistan and East Pakistan; in India, between Bombay and Bengal; in Nigeria it is the northern region that lags behind; in Egypt it is upper Egypt; in Italy it is Sicily and the region south of Naples. These contrasts often coincide with racial, linguistic or religious divisions in the country. Consequently there is political pressure from the poorer areas demanding to be brought up to the level of the richer, and any apparent neglect may unleash centrifugal forces which threaten the political stability of a country. Thus, in the second five-year plan Pakistan is directing aid from its west wing to its east wing which is equivalent to the total amount of foreign aid Pakistan hopes to receive during this period. As West Pakistan is near the point where self-sustained development would be possible, the diversion of large resources to the east wing may delay, in the opinion of some experts, the development of the country as a whole, since a self-sustaining west wing might have been in a better position to assist the east wing than it is at present. What is true of the economy in general is true of education in particular. By 1970 West Pakistan could become a region with a comparatively advanced educational system, able to make an important contribution to the development of education in the eastern wing. But what may be economically desirable is not always politically possible.

Similar problems arise in connection with the balance to be struck between rural and urban education. It is clearly easier in almost every way to develop education in the towns than in the country; and it is almost certainly more effective in its results. Yet in the poorer countries there is considerable pressure on the government to spend as much *per capita* on rural education as on education in the towns. The technical feasibility of developing urban education is so much greater than that of developing rural education that the imbalance is nevertheless likely to be permanent—as indeed it is even in the highly developed countries. Moreover, this imbalance corresponds to the

needs of the economy, for its fastest growing sectors—industry, commerce and administration—make proportionately far greater demands on skilled manpower than does agriculture.

RURAL EDUCATION

Many of the underdeveloped countries, particularly in Asia, have between three-quarters to four-fifths of their population in rural areas. This population is frequently scattered in isolated homesteads or small villages. It is often intensely conservative and often has no tradition of education, except perhaps of a predominantly religious kind. Families are big, the authority of the elders is unchallengeable, and the children form an essential part of the working force as at present organised. Where schools have already been established, they are small and often have only one teacher who himself has to work as a farmer or labourer to eke out his pay. There is often hostility in the village between the teacher and other members of the community, particularly the priest.

At the outset, a certain distinction must be made between those countries which have decided to give priority to agriculture as the major means of economic growth, and those which have decided to give priority to industry. In the latter, the development of rural education is likely to be slow and to represent to some extent a wasteful use of resources. There will of course be local political pressures for the diversion of funds to rural education, but the amount of effort which should be devoted to it ought to be as low as is politically feasible. The problems of improving education in countries relying on agriculture are almost insuperable, and this is itself an argument against such a policy.

In those rural areas depending almost exclusively on subsistence agriculture, there arises the question of non-monetary economy, in other words of payment in kind. There is no local money available to pay teachers brought from the outside. On the other hand, payment from central government funds to teachers recruited on the spot might not be effective, since there is not a sufficiently developed local market to permit them to spend their incomes. In these areas a large part of the development of education is on a subsistence basis. The teacher's reward will have to be made up largely of payment in kind: housing, food, clothing, furniture (which can all be provided from local sources), perhaps also certain social security benefits.

In any case, the problem of teacher recruitment will always be

difficult. People qualified to teach live mainly in the towns and are unwilling to go back to the country, and the country people do not take readily to townsmen as teachers. It might be possible perhaps to make it a requirement that no graduate remain unemployed in the town so long as there are rural teaching posts waiting to be filled. But the imposition of such severe measures would require a sense of national service and purpose which in most cases would have to be created and developed. Alternatively, those who are eager to work in town schools might be required to serve first for a certain period, say three to five years, in rural communities. This, in fact, is the method used in France and some other European countries to recruit teachers for village schools.

It should be recognised, however, that any young man or woman being sent into a village is being presented with a lonely life, frequently in an hostile and discouraging environment. This feeling of isolation might be overcome to a certain extent by concentrating rural education wherever possible, either in one central village, or at a point most convenient for a group of villages. It would also be better to build one school with two teachers rather than two schools with one teacher each.

As can be seen, rural education need not be as expensive as it is often thought to be. Even the question of school building can be solved without any great expenditure; there is no reason why a village school should not be a simple building made from local materials and constructed by village craftsmen on the basis of voluntary or compulsory service. In many countries with a largely non-monetary economy, compulsory labour is a form of taxation frequently used.

It should be borne in mind that in the areas considered here there is no tradition of literacy and, indeed, even those who have become literate have little occasion to read or write. It is worth considering whether rural education programmes should not be carefully correlated with programmes for agricultural extension services, land reform, the adoption of new agricultural techniques and community development. It would then be less important to provide a teacher in the accepted sense than to provide what has come to be called a multi-purpose worker who can give training in agricultural skills and elementary hygiene as well as conventional education.

Lastly, there is the perennial problem of school attendance in rural areas. The rhythm of agriculture dictates that at certain times of the year all hands should be working in the fields, whilst at other times

almost all hands are idle. Therefore any attempt to forbid the use of child labour in rural areas would almost inevitably break down at the first harvest or at the first local disaster. Furthermore, the use of child labour in agriculture may in itself be a useful means of developing agriculture—if the children have learnt better techniques than their parents have known, they may themselves become useful educators. Moreover, there is likely to be a considerable scarcity of educational facilities in most rural areas for a long time to come, so that there would be little point in enforcing child labour laws in the interest of school attendance in these areas. It is believed that at least one-fifth of the children enrolled in schools in Pakistan do not in fact attend at all except on the days when inspectors are known to be in the neighbourhood. Any attempt to forbid child labour in these circumstances would be doomed to failure and liable to bring the law into contempt.

URBAN EDUCATION

Urban education is of particular importance to countries in which emphasis is being laid on industrial growth. It can be said in general that in all countries urban education is far in advance of rural education. The geographical concentration of the population makes for bigger schools; it also makes possible the provision of secondary schools. The teachers have better qualifications, and the higher standard of living permits more money to be spent on education. The problem of a non-monetary economy does not arise, and it is much easier to organise the administration of education. And as the towns grow faster than the population as a whole, the concentration of education in the towns becomes more and more accentuated, especially as it is in the towns that the development of higher skills is most urgently needed.

The development of urban education raises several serious difficulties.

First, there is the question of capital expenditure for buying land and building schools. This is mainly a problem of allocating local resources, as the foreign exchange element of this expenditure is negligible. As will be seen later, however, foreign aid can make an indirect contribution here by permitting the diversion of local resources from other projects to school building.

Second, there is the problem of recruiting a sufficient number of adequately qualified teachers, which raises a set of difficulties quite

different from those encountered in rural education. It raises in fact the whole question of the status and pay of teachers which, however, will be discussed separately in a later section.

Lastly, there is the problem of school attendance. The more active and intelligent children in towns are likely to be in good jobs. They cannot be easily traced in the rapidly expanding and overcrowded towns which characterise the underdeveloped areas, all the more as they shift their homes continually and are not registered for any governmental purposes. It would need therefore a very strong supervisory force of school-attendance officers and child-labour officers if children are to attend schools in any great number.

TECHNICAL EDUCATION

It is evident that technical education must have a high degree of priority as it is directly connected with the provision of skilled manpower.

The first question which arises in this connection is the degree to which the general curriculum should be given a technical bias. It has been urged that all education should have some practical bias, and there are strong pedagogic arguments to support this policy.

Next, it may be asked to what extent special technical institutions should be separate from other schools and colleges. The disadvantages of separation are more obvious than the advantages. Separation may imply lower status for the technical institutions, and also lead to over-specialisation in skills which may become redundant.

Thirdly, how far should technical education be developed in conjunction with actual work in industry, commerce and agriculture? The great advantage of this approach is that it economises in manpower: the worker-student is directly productive while learning, the teacher is directly productive while teaching. On the other hand, this kind of education is often wasteful because the drop-out rate is high; and it may also have severe limitations in developing true skills.

The major problem however is that of providing technical teachers. They have to be recruited from among those who are already technically qualified and mature, and are therefore likely to expect higher rates of pay than other teachers, even though their academic qualifications are lower. A solution to this technical training problem is the "each one, teach one" process, where every skilled worker is also qualified and expected to teach another person. A meeting held under the auspices of UNESCO recommended that all technical courses

should include some pedagogical preparation, so that skilled workers can transmit their skills effectively.¹

As can be seen, the difficulties in the way of developing technical education are partly social, partly connected with the educational structure, partly financial, but mainly due to the shortage of qualified teachers.

CHOOSING THE APPROPRIATE LEVELS OF EDUCATION

As has already been observed, the expansion of one sector of education implies corresponding changes in other sectors. But it is not easy to trace the eventual effects of what may seem to be a simple decision to expand any one sector.

Part of the answer will be dictated by the nature of manpower requirements. If there is an acute and persistent shortage of certain kinds of skill, the level of education for those skills will have to be provided. However, the higher the level of education called for to provide these skills, the broader will have to be the expansion of the base because of the drop-out at each level.

But another part of the answer will be dictated by the availability of funds, teachers and other resources. Women may be available as primary teachers but not as secondary teachers; arts graduates may be relatively plentiful, while scientists may be in short supply. In each case, the solution will depend on the particular circumstances.

PRIVATE EDUCATION

In many countries private education is more extensive than it might appear at first sight. It is estimated that in Portugal, for instance, private education is dominant at the secondary education level both in quality and quantity and because of the high social standing of the classes which use it. This is also true of Turkey and the countries of the sub-continent of India. UNESCO points out that in several African countries (especially those formerly under British or Belgian administration) the major part of education is privately organised and financed, although it also benefits from public subsidies.²

Furthermore, a surprisingly large proportion of the total expenditure on education comes from private sources. In Portugal this propor-

1. Michel Debeauvais, *Tiers Monde*, Janvier-Juin, 1960.

2. Unesco/Ed/Africa/2, Paris, January 1960. *Rapport provisoire sur les besoins de l'Afrique Tropicale*.

tion may well be one-third; if account is taken of this private expenditure, the percentage of the national income devoted to education reaches the level which was obtained in the United Kingdom between the two World Wars; whereas if only public expenditure is taken into account, this percentage sinks to the level obtaining in the United Kingdom at the turn of the nineteenth century. It is because the available statistics do not take account of this private sector that the picture of education they project is distorted, particularly in the field of secondary education where the private sector plays such a large part.

Here it may be useful to ask to what extent secondary education should be free and to what extent it should be fee-paying. In some underdeveloped countries secondary education is entirely free, but in most, parents have to make some contribution, so that the public sector is to some extent dependent on revenue other than taxes. On the other hand, the private sector, while benefiting from public subsidies, is mainly dependent on revenues from fees, investments, grants and donations. Clearly any increase in revenue from fees is to be welcomed, because it releases public funds for purposes which private funds would be unwilling to finance. The arguments against privately-financed education are not as strong as they are sometimes thought to be. Social surveys show that it is predominantly the well-to-do who avail themselves of public education at the higher levels. As they are well able to afford to pay for their children's education, it is in a sense paradoxical that they should be provided with it free, in fact at the expense of the less-favoured members of the community. In this instance, the provision of free public education represents a transfer of income from the poor to the well-to-do. It is much more logical to provide substantial facilities for the education of able children from poor families in private as well as public schools. The provision of such *scholarships* should be a major element of educational strategy in the less-advanced countries, because it will affect the whole development of private education.

Private education often reflects confessional, racial or social divisions. It would be an error, however, to assume that because this is, or is believed to be, the case, the educational planner should ignore the private sector or dismiss its economic value. In particular, vocational teaching in many skills is almost exclusively a private responsibility of firms and employers. Any strategy for educational development which ignored the private sector or sought to eliminate it

would be expensive and wasteful, although such a policy might be justified on social and political grounds.

WOMEN'S EDUCATION

Women's education appears at first sight to have a low priority in terms of providing skills for the labour market, though even here certain obvious exceptions—teachers, nurses and textile workers—must be kept in mind. The place of women in less-advanced countries is determined by their low social status, and in almost all societies by the fact that their main role is played in home-making. Nevertheless, this situation is not immutable: in the U.S.S.R. women make a full contribution to the labour force.

But it is precisely in home-making that women's education can have its most far-reaching effects. It is in the home that attitudes are fixed, ways of life established and traditions continued. The profound change in patterns of behaviour and expectations which is necessary if the concept of economic progress is to be introduced into traditional societies must depend in great part upon the attitude of the home-maker. Women's education therefore should have a high priority not only on social and human grounds, but mainly because it is likely to be the way—possibly an indispensable way—of removing social, cultural and psychological barriers to economic growth.

Nor should education for providing skills be ignored. In the Soviet Union 69 per cent of the teacher force is female, and in the United States the percentage is slightly higher. The woman-teacher is less costly because she has less opportunity of lucrative alternative employment and also because women's wage rates generally are lower than those of men. The employment of women-teachers is therefore a means of reducing the cost of education, which is in itself a sufficient justification for the education of women.

Obstacles to educational expansion

From what has already been said, it is clear that the development of education involves some major choices which have to be made in the light of local conditions. Should emphasis be put on rural or urban education, on the education of men or women, on primary or secondary education? But even when the choices have been made, there remain some formidable obstacles to be overcome in implementing them. These obstacles may be due to a faulty structure of

education, or to some social factors, more frequently to the shortage of teachers, and almost invariably to a lack of financial resources.

THE EDUCATION STRUCTURE

As has already been noted, the educational pattern in the under-developed countries is often copied from advanced countries and does not correspond either to the needs or the means of the country. It is therefore in itself an obstacle to the expansion of education at almost all levels.

One of the most important aspects of this maladaptation is the high rate of "wastage" due to the dropout of pupils at all levels of education. Out of a primary class in Pakistan only 2 per cent of qualified people will eventually emerge. In the medical college at Dacca of every hundred students enrolled only two doctors are eventually produced, which makes the average cost of training a doctor extremely high. It follows, that, unless the causes of this dropout can be tackled successfully, it is important that some sort of qualification should be awarded at intermediate stages, so that there is always something to "show" for whatever knowledge or training has been acquired and which can be put to economic use. This emphasizes the value of changes which tend to split long courses with high final qualifications into intermediate stages, each of which is rewarded with some kind of useful qualification. This seems to be well understood in the Soviet Union, where it is common for 90 per cent of the students to succeed in passing examinations. It is relatively rare for any student to fail and withdraw from a course for purely academic reasons. In a poor country anyone who has some training is more useful than someone without any training—provided that certain elementary standards of initial selection are maintained.

It is important to inquire into the causes of drop-out. One of them is undoubtedly inadequate selection of pupils. The problem is often to discourage pupils from beginning an education that they will never be able to complete. This appears to be the case in Indian universities, and careful selection would appear to be especially important for higher levels of education. Another cause of dropout is that promotion from one grade to another often depends on the achievement of a certain standard. It would seem that automatic promotion, which is practised in some "progressive" systems of education, reduces the dropout, but it could hardly be applied to any but the lower levels

of education. Apart from these factors, due to the structure of education, there are also economic and social causes of dropout. These will, however, be considered in the next section.

Another aspect of inapposite structure relates to high-level specialisation. A good example is the training of nuclear physicists in India. Sometimes a heavy burden is placed on the whole educational system in order to produce a few highly-trained specialists in a limited field. The cost of these specialists is out of proportion to their possible output, and there is here a strong case for the regional development of higher specialized institutions in which the number of students must be severely limited. This, of course, runs counter to the traditional view of the functions of a university, but it is a view which does not always conform to the economic necessities and possibilities of a poor country.

SOCIAL FACTORS

As already noted above, the major causes of dropout are often of a social nature: parental opposition and lack of means. It is in this connection that such things as social expenditure have been introduced into education. It takes the form of free or subsidised meals, free or subsidised medical treatment, maintenance grants, assistance towards boarding costs and scholarships towards fees.

The role of social expenditure in education is much wider than merely reducing the dropout rates: it may often be the principal means in reducing social inequalities and thus attracting the able but impecunious into education.

In all countries, including the United Kingdom, the United States and the U.S.S.R., access to educational facilities is unequal. Children of poor parents, children who live in the country, children from big families are all handicapped compared with children of rich parents, children from towns and children from small families. Since underdeveloped countries all have a predominance of unskilled workers, country dwellers and big families, the handicap arising from these factors is relatively more severe than in the developed countries. This handicap can only be overcome—and this only in part—by judicious social expenditure.

THE TEACHER PROBLEM

Undoubtedly the central problem in the development of education is the supply and the status of teachers. The expansion of teacher-

training is perhaps the most urgent educational need of the underdeveloped countries.

Apart from untrained teachers, there are three main sources of recruitment for teachers: the normal schools, teacher-training colleges, and universities and other institutions of higher learning. University graduates usually provide the teachers for secondary and higher education while the other two categories (together with the untrained) provide teachers for the primary schools. In order to expand the teaching force, there must therefore be either an expansion of teacher-training facilities, or an increase in the length of service of teachers, or an import of teachers.

Obviously in the case of underdeveloped countries, the biggest quantitative need is for education at lower levels, and consequently the major sources of teachers-training must be the normal schools (where the pupils act as part-time apprentice teachers) and the teacher-training colleges. As the latter take their students from secondary schools, any expansion of the teacher-training colleges entails an expansion of secondary schools, which in turn requires an increase in the number of teachers qualified for teaching in secondary schools. This increase can be achieved either by the expansion of university-training or by redirecting existing graduates into teaching. As for the normal schools, they take their students in most cases directly from the primary schools and have little difficulty in attracting recruits, first because they usually offer the only opportunity for the student to acquire a secondary education, and also because the students can join the teaching force at a very early stage.

In addition, there is urgent need for the in-service training of teachers. The establishment of colleges to give short residential course or, in larger towns, part-time training should have high priority, and incentives should be provided, in the form of promotion prospects, to encourage teachers to follow this form of further education. The Ford Foundation has begun a programme which makes available such in-service refresher courses in India and Pakistan, and programmes are being widely used elsewhere.

An important consideration in providing an adequate teaching force is the economic and social status of the teacher. The structure of salaries generally in the underdeveloped countries does not reflect the conditions of the labour market for skilled people; salaries reflect, more often than not, local social status rather than scarcities of skills, and in many countries the status of many teachers is low.

It has already been remarked that the result of this is unemployment among people with skills. The market price of a teacher, for example, may well be below what is conventionally acceptable. In general it is quite impractical to suggest that teachers should be paid more; though their low pay is one of the reasons for their low social status. In part, salary differentials in teaching can attract the better graduate, or encourage teachers to work in poor areas; but professional communities may militate against such measures. A campaign to raise the social status of teaching may be a substitute for a hopelessly expensive proposal to raise pay scales; in the long run, a revaluation of all skills by a national wage policy is probably a *sine qua non* of an adequate policy to make use of scarce skills in the interests of economic development.

Salaries are not the only incentive; since social security in these countries is rudimentary, the provision of fringe benefits of all kinds for teachers would constitute an important incentive for entering the profession. The first inducement which might perhaps be offered is a guarantee of permanent employment, and the second a retirement pension. It is important to realise that retirement pensions offered now on a non-contributory basis to teachers in their twenties will only fall due for payment around the year 2000, by which time these countries may hope to have much larger national incomes than they have at present. Consequently even quite generous pension schemes would not put any immediate burden on the exchequer. Housing and medical services are other incentives which governments can generally provide at a lower cost than that a private individual would have to pay.

A vital role in the teaching profession must be played by women. In the case of primary education, they are the major source of the supply of teachers in most countries (at least outside the Muslim world). It is therefore necessary to strengthen considerably the secondary education of girls which, in most countries, has fallen considerably behind that of boys. However, most women teachers will have a predominantly literary bent or at least an anti-scientific and anti-technical bent. It becomes therefore important to consider how boys and girls in primary schools staffed predominantly by women can be taught at least elementary mathematics, technical subjects and possibly some science. It might be possible to counteract this anti-scientific bent of women teachers by adopting co-education in secondary schools. It should be remembered that in under-

developed countries secondary education structure reflects one of three major models, those of France, of the United Kingdom and of the United States, and that copying the British and French models has meant the separation of boys and girls at secondary school level.

As has already been pointed out earlier, women teachers cost less than men teachers, so that their extensive employment makes for a reduction in the cost of education per pupil which must be a major aim in these poor countries.

There is lastly another potential source of teachers which should not be neglected; the unemployed graduate and the unemployed educated person who is not a graduate. This group poses a serious social problem in the underdeveloped countries. In India there are three-quarters of a million unemployed graduates, and in Pakistan there may well be 70,000 (they are the equivalent of high-school graduates). Burma, Ceylon, the Philippines and the Middle East countries also have considerable numbers. To draw these people into teaching, it would be necessary to give to the teaching profession a social prestige and status which owed little to financial reward. Indeed, it is difficult to see how any economically viable educational development can take place at all rapidly without first arousing an intense spirit of public service.

13-3. Teacher education: a focal point

"Above all, we must view the education of teachers as belonging at the very heart of any human resource development plan."

R. FREEMAN BUTTS

John Vaizey reminded us that the teacher is the central figure in the development of education. Freeman Butts now faces two complementary questions that arise in considering the preparation of teachers in emerging nations: (1) What is the responsibility of the universities in educating teachers and educational leaders? and (2)

What are the hallmarks of a university curriculum that would be suitable for producing teachers who would be genuine modernizers? Arguing that the education of teachers must be "at the very heart of any human resource development plan that hopes to contribute to the modernization and building of a free nation," he concludes that "our plans for human resource development must include a realistic strategy for the introduction of change and innovation in universities, a strategy to which many educational planners have not given much thought." The guidelines for teacher education that he suggests and the challenges to university programs that he describes go far toward defining the task of educational planning that would be fundamental rather than peripheral.

[R. Freeman Butts]

If the universities are to be assigned a major role in the human resource development plans of a nation, as I believe they should be, then those plans must recognize that teacher education is at the very heart of the university's task. If I may say so, I believe that African universities, along with British and American universities, should perceive their responsibilities in teacher education far more directly and urgently than they have thus far done. Too little is said about teacher training in recent reports on African higher education. (Notable exceptions are the Ashby and Lockwood reports.) Conversely, too little is said in general manpower planning reports about teacher training in universities. This conference has a great opportunity and a greater responsibility to make the connection so clear that no human resource or manpower study, or educational plan, or proposal for higher education will ever again neglect the high priority that teacher education should play in the aims and programs of African universities and of African nations.

If African universities do not respond effectively and quickly to

R. Freeman Butts, "The African University and Human Resource Development: An Educationist's View," Conference on the African University and National Educational Planning, Afro-Anglo-American Program in Teacher Education and Institute for Education in Africa, Teachers College, Columbia University, Lake Mohonk, N.Y., September 8-18, 1964, pp. 3-13. (Mimeographed.)

increase the flow of highly qualified teachers to the schools, some of the most grievous mistakes of British and American educational history may be repeated, as the degree-granting institutions turned their backs on the lower schools and the profession of teaching and surrendered the field to normal schools, teachers colleges, and training colleges. A number of pernicious dichotomies were thereupon transferred to the African territories: sharp distinction and gaps between primary education and secondary educational institutions and the universities. These separatist traditions in education wherever found help to perpetuate divisive conditions among differing, sometimes warring, social, political, economic, ethnic, and religious groups. In the place of these separatist tendencies I believe we should try to substitute greater congruity among the several levels and branches of education so that they will exhibit closer agreement in purpose and better integration in practice.

The traditional gaps between such groups as these have been greater in all our countries than we would like to admit, and these gaps have been responsible for their share of blame for the low prestige and low priority accorded to professional education in the university hierarchy of studies. In turn the prestige of the profession suffers in public estimation. And all over the world teachers are universally poorly paid and oftentimes poorly prepared. Despite its newly won recognition as a key to development, education continues to come off second best in manpower allocations in comparison with the more lucrative, the more powerful, or the more glamorous occupations. The raising of the prestige of education should begin at the home of learning—in the universities. And if education for unemployment is not to grow, as suggested this morning, students may need to be persuaded that it is really better to teach than to starve.

The principle of congruity is even more necessary within the universities themselves. University departments and institutes of education should be meeting grounds for professional educators, for university scholars in the several academic disciplines, for the ministries of education, for the teacher training colleges, and for the professional organizations. Duplication of effort, unrelated courses of action, indifference, or even open hostility have sometimes marked the relationships of these several groups. Strong leadership in each quarter dedicated to the improvement of interrelationships is needed, if universities are to live up to the demands for helping to improve the educational systems upon which they depend.

We need a concerted attack upon improving the whole range of courses in education, strengthening the academic preparation of teachers, and sharpening their professional skills. Above all, we must view the education of teachers as belonging at the very heart of any human resource development plan that hopes to contribute to the modernization and the building of a free nation. Unless this is done, teacher education will be relegated to a few vague generalities in reports on manpower needs or university development or it will be condemned to a preoccupation with the minutiae of classroom management and thus occupy a position of low prestige in the priorities for human resource development. . . .

In the hope of warming us up to our discussion I should like to make three general propositions and discuss each very briefly:

1. The diverse and often disparate political, economic, cultural, and national aspirations expressed by the new African governments for their universities must be rationalized into a congruent set of educational priorities if they are to be translated into an effective program of higher education and of teacher education.

2. The fundamental academic assumptions that underlie the university traditions already established in Africa must be reckoned with and, if need be, reexamined in order that their validity may be tested in the light of requirements imposed by these aspirations and by a human resource development theory that takes teacher education seriously.

3. The political, social, psychological, and cultural values that form the context of African life as it faces the prospects of change from traditional to modern forms should be the continuing subject of careful, objective, and empirical research. Such study should provide the basis upon which to formulate a congruent program of teacher education that will bring together African aspirations, inherited university patterns, and the findings of social science research.

Turning to my first proposition, a succinct and authoritative example of African aspirations for African universities is contained in the *Conclusions* listed in the Tananarive Report (p. 19):¹

"In addition to its traditional functions and obligations to teach

1. The Development of Higher Education in Africa, Report of the Conference on the Development of Higher Education in Africa, Tananarive, 3-12 September 1962, Unesco, Paris, 1963.

and to advance knowledge through research, the role of higher education in the social, cultural and economic development of Africa must be:

1. To maintain adherence and loyalty to world academic standards;
2. To ensure the unification of Africa;
3. To encourage elucidation of an appreciation for African culture and heritage and to dispel misconceptions of Africa, through research and teaching of African studies;
4. To develop completely the human resources for meeting manpower needs;
5. To train the "whole man" for nation-building;
6. To evolve over the years a truly African pattern of higher learning dedicated to Africa and its people yet promoting a bond of kinship to the larger human society."

Now one can agree with each one of these six general propositions separately, as I suppose all of us here would do and as I do, but when it comes to delineating in concrete terms just what each proposition means for a particular university program and what it means for educational development *in relation to the other propositions*, I am not sure how much consensus there would be. This is one of the things I hope we can sort out at this conference. We all know that the goals of education are relatively easy to state in general terms, but we also know that they are sometimes hard to realize in the curriculum programs that university faculties solemnly draw up in committee or in general debate or that ministries of education hammer out in the stress of administrative obligation or the pressure of political responsibility. The *Tananarive Conclusions* are a significant statement of African aspirations for African universities, but I submit that as they stand they do not provide very precise guidelines for drawing up a curriculum for a university or for defining a program of teacher education.

In one breath universities are asked to serve the purpose of nation-building and in the next breath they are asked to ensure the unification of Africa. Does this mean that all African universities should have a common goal, or does it mean that as a particular nation goes so should go its university—and the training of its teachers? On a continent of more than thirty independent nations at various stages of development is there one "truly African pattern of higher learning"—and of teacher education—or may there be diverse patterns properly in the making?

Should a university's attention to programs of study that develop "the whole man" equal those that meet specialized manpower needs? If it takes seriously its obligations to develop human resources through teacher education, will this require changes in admission policies or allocation of students to various fields of study?

What is to be done if a university's conception of "world academic standards" does not exactly coincide with a government's belief that the university should act as an instrument for the "consolidation of national unity" or that its mission is to "define and confirm the aspirations of the society which it is established to serve?" Does this mean that the development of habits of objective analysis and critical thought is any the less to be prized for university students and prospective teachers in an African university than elsewhere in the world?

These may be peculiarly difficult questions to answer—or, I suppose, even to discuss. Nevertheless, I believe they must be discussed. In doing so I suggest that certain distinctions need to be made. I would argue that a university does have the obligation to "serve the society" that supports it and that a government may legitimately exert claims upon a university to "serve the nation" by expanding the range of its studies to promote modernization and to prepare teachers for the urgent tasks that face the nation, but I would also argue that a government cannot legitimately require the stifling of intellectual dissent or the stifling of political dissent—and still claim that it has a university. If it insists upon requiring political orthodoxy from a university community it may have a government teaching bureau or a staff college or even a polytechnical institute on its hands, but it no longer has a university—whose very life blood is intellectual freedom. . . .

This brings me to my second proposition:

A general theory of human resource development for universities that gives priority to teacher education should not only face the reality of what Africans say they want with respect to their universities and national development, it should also recognize the strength, tenacity, and continuity of the varying overseas university traditions that have already been established and are more or less flourishing in Africa today. And I might add, with some conviction, a flourishing university is a peculiarly resilient, enduring, and tough specimen of human organization. The history of higher education in the world is replete with many instances of university types of institutions that have survived the march of warring empires and outlasted many forms

of government and of dynasties. (Even the fairly short history of higher education in America, which I know best, shows a strong bias toward tradition and reluctance to embrace change.) So our plans for human resource development must include a realistic strategy for the introduction of change and innovation in universities, a strategy to which many educational planners have not given much thought.

Despite the strength of continuity, or as some would say, of inertia, in universities, change does come about, and as often as not it has come about from the process of cultural borrowing and international transplantation or influence. (William Brickman traces international relations in higher education at least back to the Universities of Takshasila and Nalanda in Northern India some 2500 years ago.) I would be tempted to argue that the most vital and creative university institutions in history have been those that did borrow ideas and adopt forms from other countries and other peoples rather than shut themselves off from outside influences and confine themselves to their own culture-bound institutions. Fascinating as such an historical argument would be, I must eschew its pleasures at this time to return to the problems raised by the fact that most present African universities have been modelled principally upon British or French university traditions. There is even some evidence that a few of them are in danger of being subverted by a creeping Americanism.

Now, what does it take to change and to adapt these university traditions to African conditions, the better to meet African needs and to build truly African universities? In the view of some, these traditions of Western university education at their best make the university a repository of the highest expressions of human intellectual achievement and man's creative expressions. In the view of others, such traditions at their worst display a narrow and pedantic preoccupation with the socially unimportant. The truth probably embraces both judgments in some form. Proud and jealous academic faculties probably view themselves in the former image; impatient and simple-minded one-party governments may hold the latter view.

The task of reconstructing universities to meet African needs is basically the passing of judgment upon the value of the university traditions that have been transplanted and the finding of ways to reorganize a basically stubborn organism without impairing its essential vitality or destroying it altogether. . . . It is easy for some planners or human resource strategists to jump to the conclusion that because African universities have been weighted in the past too heavily on

the humanistic side therefore the new African universities should stress service to national development by greater emphasis upon the scientific, the technical, the professional, and the practical. They may be correct in individual cases.

My own predilection, however, leads me to say that a university that takes seriously the task of improving the entire educational system of a people through the education of teachers must serve liberal as well as professional and vocational goals: it must serve both cultural and practical purposes; it must serve both theoretical and technical ends; it should have room for general as well as for specialized studies. It should *not* embrace illiberal or anti-cultural studies. Illiberal studies whether in the humanities or the professions exalt the ungenerous, the mean, the slavish, or the despotic and cultivate prejudice, bigotry, narrowmindedness, and conformity in thought and action. Anti-cultural studies whether in the arts or sciences are those self-serving, egocentric, or ethnocentric studies that teach the individual to see everything in terms of himself or the selfish interests of his own group, to judge everything in relation to the way it will serve his private concerns or the concerns of his own particular group or nation. My university would test all that it does to see if it serves both the liberal and the cultural: the liberal values befitting free men who have learned to be self-governing, intellectually, politically, and personally; and the cultural values whereby the individual is put in command of the resources of knowledge, wisdom, and creativity that may be derived from his local and particular civilization as well as those of the broader international and world civilization. . . .

I would imagine that underlying our discussions will be some such theme as this:

Should African universities be encouraged to embrace an increased range and diversity of studies that will enable them to train effective leaders to do those things that must be done in a developing society but which are not now being done or cannot be done by other agencies of education?

Answers to this question will inevitably be based upon one's conception of what it is proper for a university to do, as I have just been pointing out. Answers will also reflect political pressures and social realities.

This brings me to my third proposition.

I have been arguing that an appropriate plan for human resource development that takes teacher education seriously must not only

reckon with African aspirations but also with the nature of the university traditions in Africa and with the possibilities of change within the African universities of the future. I would argue no less that an effective plan for human resource development must envision a program of teacher education in the universities based upon study of the political, economic, social, intellectual, psychological and cultural context within which universities and teachers must work. This study should spring from a well-rounded, empirically-based analysis of social change which brings together the best evidence concerning the interrelationships of economic growth, social trends, and personality formation. . . .

When the work of . . . [social scientists in all these areas] is brought together with the work of professional educators, many of whom are present in this room, we can hope for the most significant breakthrough in education I can think of, the plotting of the role of education and the formulation of a program of teacher education that will genuinely contribute to the process of modernization and nation building. Many scholars have pointed to the serious social gap between the modern-minded Western educated elites of Africa and the tradition-minded masses of the people. Few have worked out just what elements within the Western-oriented education helped to produce this gap, and fewer still have shown in detail how the new African-oriented education of schools and universities will reduce the gap, change the attitudes of tradition-minded people, and produce the new African personality. I know of no one who has charted the course whereby the new African teacher will be enabled to assume his strategic task in the transitional process of change from a traditional to a modern style of life.

If the teacher is to play his part in modernizing Africa, must he not be able to aid his students and his people to recognize the nature of their traditional ways of life and to help them learn how to embrace the broader loyalties of a modern style of life while at the same time achieving a reassuring sense of personal identity? Somehow, traditional loyalties to a particular family, tribe, or locality will be broadened to embrace general loyalties to the new nation and to the old world; social roles based upon inherited status, class, or occupation will increasingly be based upon individual achievements; the mother tongue of an oral tradition will be modified by an international language based upon written and mass media of communication; a rural and agrarian subsistence way of life will be confronted by in-

creasing industrialization and urbanism; social, intellectual and geographic isolation will be disrupted by greater mobility and widening of cultural perspective; affective coloration and inherited religion will be tempered by rational enlightenment; and obedience to colonial or regional rules will be transformed by the obligations and freedoms of self-government.

Please forgive that long sentence, but according to scholars of the modernization process, these are some of the characteristics that individuals are required to develop if their traditional society is to be transformed into a modern society. Far too little attention has been given to the precise role of formal education or of the teacher in this transformation process, and yet every theory of social change lays a heavy burden upon "education" if the society is genuinely to change without a complete social breakdown or disruption. . . .

If we are to take seriously the generalization that education has a key role to play in nation-building and in the modernization process, then teachers must become modernizers. To aid in this process, the education of teachers should correct the relative neglect and low priority long given to the social sciences in most African universities. I believe that greater stress and attention should be given to political science, economics, sociology, anthropology, social psychology, as well as to history and human geography. Prospective teachers need such social science training as much as if not more than any other type of leader.

Many social scientists are struggling with the problems of the inter-relationship of the several social sciences and the possibilities of an interdisciplinary or integrated approach to the social science curriculum in the African secondary school and university. Some believe that an interdisciplinary education is necessary because the real problems of nation-building and modernization in Africa are interdisciplinary. (Specialization may be appropriate for training in the technical professions but not for leadership that must face the complicated current needs of Africa.) Some believe that all university students should be required to take interdisciplinary or integrated courses in African studies or African institutions. This would be a major revolution for some universities; it would be a major academic exercise requiring great ingenuity and great perseverance wherever it is tried.

13-4. Making the curriculum equal to the task

"Each country should have its own [curriculum] procedure, consistent with its needs and resources."

UNESCO REPORT ON CURRICULUM
REVISION AND RESEARCH

To teacher supply and teacher training we must add a third ingredient of crucial importance in the planning process, the curriculum. On the content and impact of what is taught depend the hopes of all educational plans, the real growth point in educational change. This nexus of educational development, surprisingly, gets relatively little attention from planners. Curriculum seems far away from the big issues of national plans and budgets, priorities within education, and even teacher training. Planners frequently relegate curriculum development to low-ranking functionaries.

Yet, in so doing, they miss vital opportunities. What is taught in the schools has every reason to be a national concern of as much importance as is that of what is spent on the schools. Further, the curriculum is more than a set of facts to be taught that, once devised and assembled into programs for teaching, can be repeatedly so taught. The curriculum is more like a creative, dynamic and continuous process growing out of the reciprocal relation between educators and educated.

This larger concept of curriculum building is embodied in the following UNESCO statement on steps in curriculum revision and development.

[UNESCO Report on Curriculum Revision and Research]

Steps in curriculum revision and development

Like educational reform and planning in general, curriculum revision and development, to be effective and sound, involves a number of interlocking steps. The steps given below are, in a sense, a synthesis of the procedures that have been found useful and practicable in the different countries included in the present survey. They, therefore, represent the combined judgement of educators in all parts of the world who have given the problem of curriculum revision and development careful thought. They conform closely to the suggestions made at the three regional seminars on primary school curriculum, referred to in Part 1 [of this report], in Europe, Latin America and South Asia, and to the thinking of the International Advisory Committee on School Curriculum as embodied in Chapter V of the report of its first session in 1956, also referred to above.

It is not suggested that these steps should be followed in the order given or that all of them should be included in every scheme of curriculum reform. Each country should have its own procedure, consistent with its needs and resources.

STEP ONE. RECOGNIZING THE NEED FOR CURRICULUM CHANGE

Before a given curriculum is changed, it is preferable that the need for such change should be recognized by the community as well as by the educational authorities. In some countries the school authorities endeavour to stimulate public interest in these matters. Indeed an increasingly large number of educational leaders would much prefer that the move to change the curriculum came from parents, business and professional men, even though in most countries the educator regards this as his field of responsibility. It seems true that his work will be more effective if he has the cooperation of the parents and other lay groups.

However, effective curriculum revision has been started in a variety of ways. In some countries, the initiative has come from the highest

authority; in others, from the teachers or even the students. Instances could be cited where the desire for change originated with the general public. Sometimes the need for change has been indicated by the results of studies and research in education, psychology, sociology, and related fields. Under certain circumstances, the special needs of children in a given community have led to a demand for change in the content of the school curriculum.

STEP TWO. MOBILIZING FOR CURRICULUM CHANGE

Generally, it has been found desirable that the head of the programme of curriculum revision should be a person who has sufficient administrative authority to get things done, e.g. the Director of Education, the Superintendent of Schools, or the Permanent Under-Secretary of Education. If the school system, is a large one, this work may be delegated to a curriculum director, curriculum specialist or co-ordinator, as the case may be. In any case, it requires the co-operation of a large number of people if it is to be successful and effective.

The most difficult problem is the selection of persons or groups to carry out particular tasks. In what way, for example, can the lay groups be most helpful? What is the main responsibility of teachers, in general, and of teachers of special subjects? In many places, it has been found that lay groups should, in the main, be concerned with school policies and not with techniques of teaching, which should be the prerogative of teachers. Then, there should be a distribution of responsibility among various participating groups or individuals, as for instance, the head of the school system, the central office, curriculum committees, headmasters or principals, inspectors and supervisors, teachers' organizations, consultants and specialists, colleges and universities, etc. Obviously, the work will be distributed in such a way as to make best use of the knowledge and experience of the people called upon to help.

STEP THREE. STUDYING THE PROBLEMS AND NEEDS OF SOCIETY

Various methods have been employed to ascertain the sectors in society in which problems and needs exist. In one country, a survey was made covering: (a) the study of socio-economic potential; (b) the study of "value goals" of the people, and (c) the study of the various problems that confront the people in their everyday living. In another country, local as well as national surveys were made of the

conditions necessary to enable the child to learn "to participate, and then to appreciate the basis of participation, in community living; to co-operate and so to create for himself the incentives for co-operation". In still another country, studies basic to curriculum planning included: (a) analysis of economic changes affecting the availability and distribution of goods, and (b) analysis of social problems—the role of mechanization in economic life, conflicts and stresses in family life, difficulties of youth in attaining proper economic and personal independence, the stresses and strains of competitive society. In less developed countries, there is the problem of intellectual unemployment of graduates of high schools, colleges and universities.

STEP FOUR. STUDYING THE CHARACTERISTICS AND NEEDS OF CHILDREN

If the curriculum is to be defined as the sum total of experiences of the learner, curriculum planning must be based on a knowledge of how children grow and learn, on awareness of their basic needs, concerns, characteristics, motivations and ambitions, and on the conditions required for learning to be effective. Although in many countries there is an abundance of materials on these topics, much remains to be done, e.g. through the establishment of child study and development centres. Studies of failure in school, or retardation, of the effect of examination, etc., have revealed that some children have been made to carry greater loads than their capacities warranted.

STEP FIVE. FORMULATION OF EDUCATIONAL OBJECTIVES

The next step is a reformulation of objectives for the various courses and at the various levels and grades. The following criteria have been found helpful: (a) objectives should be based on three types of studies—studies of the needs of society, of the characteristics of learners, and of subject content; (b) objectives should guide the selection of content; (c) objectives must, besides pointing out the essential elements of each learning situation, indicate whether they are facts to be memorized, methods to be applied in solving problems, etc.; (d) the components of general objectives should be shown, as for example, learning to think effectively will involve learning to interpret facts accurately, to detect assumptions, to distinguish facts from opinion, etc.; (e) to avoid confusion, objectives should be grouped under appropriate headings, such as adjustment to home

life, appreciation of aesthetic values, etc.; (f) objectives must be comprehensive as well as clear and specific.

STEP SIX. SELECTING APPROPRIATE SUBJECT MATTER AND ACTIVITIES

This is a difficult task, which requires besides teaching experience a very high sense of values. Research enters in at every step of the process. The appropriateness of subject matter and activities may be judged only in relation to the age and growth level of the child, his interests and needs, his home environment, etc. Experimentation is required to match the subject matter content of the course with the abilities and needs of learners. What are the criteria of selection? Several have been suggested, among which are: (a) curricula should have valid and significant content; (b) learning experiences should provide opportunity for attaining a wide range of general objectives of growth; (c) learning experiences should be appropriate to the interests and needs of children; (d) learning experiences must provide for segmental development; (e) learning experiences should have the maximum relationship to everyday life; (f) learning experiences should permit a great variety of learning activities. Others have stated the criteria this way: the subject matter should be selected and organized so that it has partial applications for the child; it should bring into play other motives in learning than fear and competition; it should encourage the formation of wholesome attitudes towards the community, it should make practical work a recognized part of education.

STEP SEVEN. ORGANIZING LEARNING EXPERIENCE AND PLANNING UNITS OF STUDY

There are different patterns of curriculum organization which may be considered such as: the subject curriculum, which is the one most generally used, the "broad fields" curriculum, the core curriculum, and the experience curriculum, which is sometimes called the "child-centred" or "activities" curriculum. In planning units of study the following steps have been found helpful: (a) survey the ideas and suggestions regarding the needs and problems of life and of the students with particular reference to the field with which the unit deals; (b) explore the experiences appropriate for attaining these objectives; (d) sketch out the learning activities to be included in the unit; (e) check

the consistency of the learning activities with the objectives and problems: (f) plan the teaching unit—arrange the learning experiences in a psychologically effective sequence: (g) determine the types of evidence needed to appraise the effectiveness of the unit.

STEP EIGHT. EVALUATING THE REVISED CURRICULUM

In many countries, the proposed curriculum is subjected to experimental tests before it is adopted for use by teachers. There are many ways to set up an evaluation programme—by means of committees, by trying out the syllabus or course of study in selected schools, or by seeing how it works after a number of years. Generally speaking, a curriculum is good and valid to the extent that it results in the attainment of the objectives of the educational programme. In any case, criteria of evaluation should be set up. Examples of such criteria are: (a) that the school shall fulfil the goals of education as conceived by leaders, educators, and parents and other responsible lay persons; (b) that the programme shall be appropriate to the socio-economic needs of the country; (c) that it shall meet the developmental needs of children; (d) that it shall contribute to effective learning.

STEP NINE. LAUNCHING THE REVISED CURRICULUM

Whatever curriculum is adopted, there must be some means of putting it into effect. This varies from the one extreme of rigid regimentation (where teachers are expected to follow strictly the letter of the standard syllabus) to the opposite extreme of unrestricted freedom (where the teacher may or may not follow the syllabus and can do as he pleases). There is no evidence of either extreme. The fact is that there is a tendency to prescribe the scope and content of the curriculum, but to leave it to the teacher to select methods and use the type of organization of material he thinks best fit his class.

Perhaps the most effective means of launching a new programme is in-service training of teachers and supervisors. Auxiliary measures might include: (a) publicizing the new programme in the press, calling the attention of the public to its more important features; (b) mobilizing community organizations in support of the new programme, i.e. parent-teacher associations, professional associations, teachers' organizations, civic clubs, etc.; (c) encouraging parents and other lay groups to visit the classes and to see the difference between "then and now"; etc.

STEP TEN. PROVIDING FOR CONTINUOUS REVISION

In some countries, certain parts of the curriculum are revised from time to time, leaving the rest with little or no change; in others, the curriculum is revised as a whole.

In certain countries, the syllabuses are put together in loose-leaf form to enable teachers to replace obsolete parts with new versions. In others, space is provided for teachers to note their observations and comments, indicate new material that may be found useful, and, in other ways, make an appraisal of the effectiveness of the different parts at the most appropriate time, namely, after using them. The manual, as it is called, is submitted for scrutiny to the Central Office or to a committee by all the teachers (in certain grades or subjects) with a view to further revision of the curriculum.

An extreme case is that in which there is no written curriculum or syllabus, the staff of each school making out the programme each year in the light of their own experience the year before and of their understanding (with the parents and education officials) of the purposes of the school and the standards to be attained.

13-5. The ethics of democratic planning

"There is no inherent contradiction between a democratic ideology and the training of persons or groups committed to and skilled in the development of planned change."

KENNETH D. BENNE

Although sensitive participants in development planning have often been concerned about the ethical implications of changes they were fostering, as indicated in Part Two, little literature has appeared concerning the ethical imperatives that should govern those engaged in the *planning process*. Perhaps this is a result of the recency and relative unfamiliarity of the process of

national planning for many now involved in it. With a somewhat longer history behind it, the community development movement has by now developed a democratic ethic of *involvement* that has done much to validate the claims of democracy to ultimate practicality in a new range of situations. As one emerging nation after another has set up a planning body, frequently involving foreign or international experts, the need for a comparable *planning ethic* is becoming increasingly clear. It is needed not only to guide the new power elites in emerging nations but also to govern the outside experts who too frequently (often under the guise of "objective, neutral science") risk introjecting unexamined private or ethnocentric values into plans. Concerned as the Western world has been with preserving its cherished values under planning for its own development, it sometimes appears to evidence less concern over basic value implications when planning for others in foreign and less familiar cultures.

The ethic of planning that follows is admittedly the democratic ethic that has proved its mettle not only in the politically and economically complex Western world but also in the arena of remote villages seeking modernization. In the following selection Kenneth Benne not only states the basic democratic principles of regarding people as ends, not means, and of eliciting full participation in decision-making, but also traces the methodological norms that derive from these principles. Although these norms are extremely useful guidelines for the democratic expert committed to training those with whom he works, they still leave unanswered some of the most perplexing problems that contemporary democracy must face particularly beyond the arena of the face-to-face community. One such question concerns the applicability of these premises when national planning occurs. A second concerns the role of the expert in fusing his knowledge with "inexpert" popular participation. Benne's contribution, however, gives us a rational basis for thinking perceptively about these questions.

[Kenneth D. Benne]

We can now state with greater precision the problem raised concerning the ethical responsibilities of the educator as social engineer in terms of democratic values. There is no inherent contradiction between a democratic ideology and the training of persons and groups committed to and skilled in the stimulation and development of planned change in social patterns and in human relationships. In fact, the effective maintenance and extension of democratic values in industrial society seem to require the services of such practitioners. Educators or other change agents must, however, be trained in ways of stimulating and guiding change which incorporate the democratic norms as basic elements of their operating methodology. The valid test of the democratic character of any engineering operation lies in the degree to which the methodology employed in them conforms to these norms. *It follows also that the best guarantee of the ethical operation of social engineers is that their basic training be focused in a methodology of planned change which unites the norms of democratic operation, relevant understandings of change processes and social structures, and skills in stimulating, inducing and stabilizing changes in persons and groups.*

Democratic principles as methodological norms

Five basic democratic norms can be identified. All may be thought of as derivations from the basic principle of democratic participation and from the analysis of the requirements which the current cultural situation puts upon processes of change. In presenting each, some clarification of its general meaning will be attempted. Some delimitation of the kind of skills which translation of each norm into social practice requires will also be indicated. It is in these skill requirements that the necessary fusion of social-psychological understandings with ethical norms of valid deliberation and decision is seen most clearly. It is not enough for an educational leader to accomplish this

fusion in his own professional perspective. His training must also include development of skill in helping the persons, groups and organizations with whom he works to accomplish this fusion in planning and evaluating the changes for which they assume responsibility. Without such fusion, democratic values tend to remain verbalisms and skills for inducing change tend to be used without the direction and control which democratic values should provide.

DEMOCRATIC NORM 1

The Engineering of Change and the Meeting of Pressures on a Group or Organization toward Change Must Be Collaborative. This norm prescribes two general kinds of collaboration. In the first place, it emphasizes the need for collaboration across lines of divergent action interests in a given situation requiring change. Individuals and groups must be helped to see that the task is to discover and construct a common interest out of the conflicting interests which they bring to the interpretation of the situation and to the direction of changes in it. This requires a confidence that the common interest to be built will be "better," will incorporate greater value for all concerned, than any partial interest initially brought to the deliberation concerning required changes. At the same time, the conflicting interests must be seen as the "raw materials" out of which the common interest is to be constructed.

The second kind of collaboration required is across lines of "theory" and "practice." A planned change in a school situation must be one which is based on the best available knowledge of relevant relationships and structures, of social forces and factors promoting and impeding various possible changes, of the consequences likely to result from alternative lines of action proposed and considered. This calls for knowledge from various social sciences. In addition, skills in creating those social-psychological conditions which will support a problem-solving approach in various phases of change must be available. It seems that planned educational change which is to be successful will require the collaboration of practitioners with social scientists and with engineering methodologists.

Neither of these modes of collaboration, between persons and groups with different interests in change and between "theorists" and "practitioners," comes "naturally" to people. "Departmental" barriers tend to divide various kinds of social scientists. "Institutional"

barriers tend to divide scientists and action leaders. Yet both modes are required if change as planned is to be guided by the rational, informed consent of those concerned. The development of the skills of productive collaboration by practitioners, representatives of various "interests," and consulting social scientists sets a central goal for educational leadership which is devoted to the democratization of change processes.

DEMOCRATIC NORM 2

The Engineering of Change Must Be Educational for the Participants. Training for planned change cannot put the importance of other goals to be achieved through collaboration above the importance of developing the unique abilities of each person in and through the social change effected. Every change operation must, in this sense, be conceived as an educational enterprise. This is not dictated alone by the democratic conviction that each person is to be treated as an end and that social arrangements are to be judged by their effects on persons influenced by them. It is dictated equally by the conviction that planning is most intelligent when it accomplishes a maximum induction from the unique contributions of all individual participants.

Individuals need to learn the skills of contribution to collective thinking if these effects are to be achieved. Groups need to learn the skills of eliciting effective individual contributions to group thinking from all members. And organizations need to develop an atmosphere which permits individuals and sub-groups to mature and communicate effectively their unique contributions to organizational change and improvement.

It is important that this educational requirement of democratic engineering be interpreted dynamically instead of statically. It is not enough that persons grow in the skills, understandings and commitments appropriate to any given situation or to a plan for the effective management of that situation. The more basic educational needs to be served in processes of planning for change are needs for the habits and skills required for further growth. The social engineer, if he is working democratically, must leave the persons and groups with whom he works better equipped to solve the particular problem which he has helped them to solve. But he must also leave them better equipped to solve subsequent problems of change, including the management of personal adjustments which change in social arrangements always requires.

DEMOCRATIC NORM 3

The Engineering of Change Must Be Experimental. It has already been suggested that democratic ideology requires us to see all social arrangements as subject to modification and alteration when their effects upon the persons influenced by their operation can convincingly be called into question. This involves an "experimental" attitude toward all social arrangements. And all social arrangements include those formed and re-formed in processes of planning as well as those shaped and perpetuated by custom. Planned arrangements must be seen by those who make them as arrangements to be tested in use and to be modified in terms of their human effects when tried.

Now, if the planning of changes is to be collaborative along the dimensions already suggested, this means that all who collaborate must be trained toward an experimental attitude and a "research" approach toward social problems. It is not enough if only the "experts" involved are experimental and research minded. Accurate determination of the human effects of institutional arrangements requires research. Collaboration in such research becomes a prime requisite for intelligent sensitivity toward changes required prior to planning. Such research is of equal importance in the evaluation of arrangements instituted by planning. That all educational practitioners, children and laymen participating in educational change become experimental in their attitude toward relationship problems faced and "research-minded" in their search for and evaluation of solutions sets an impressive task for social engineering. But our democratic norms require us to set no lesser goal.

DEMOCRATIC NORM 4

The Engineering of Change Must Be Task-Oriented, That Is, Controlled by the Requirements of the Problem Confronted and It's Effective Solution, Rather Than Oriented to the Maintenance or Extension of the Prestige or Power of Those Who Originate Contributions. In terms of social control, this means that democratic change must be anti-authoritarian. In methodological terms, this norm requires that contributions are to be judged by their relevance to the task or problem confronted, not by the prestige, position or power of those who originate them.

Persons adequate to implement this norm must be disciplined in recognizing continuously the social-psychological fact of emotional

identification with ideas and proposals as both an asset and a liability. On the one hand, it is a source of effective motivation. On the other, it is a source of unintelligent resistance to counter-ideas of merit. Democratic persons must become skilled in inhibiting their tendencies to defend and promote ideas which are in need of objective evaluation and reformulation. It is important that persons achieve sensitivity in assessing the sources of influence upon themselves and to differentiate between dependence upon status figures and dependence upon fact-oriented and task-oriented influences.

Democratic groups need authority roles for effective coordination of their problem-solving activities. But groups need to learn to judge authority roles in terms of their contribution to such coordination and not in terms of the general prestige, respectability or status of certain members.

The task of training persons and groups to achieve effective communication across barriers of prestige and differential power is far from easy. This is nowhere more difficult than in educational change where the basic status differences between children and adults as well as the more usual status barriers between teachers (workers), supervisors and administrators must be taken into account. It is in creating conditions for releasing such productive communication that many of the most baffling social and psychological difficulties of training for democratic change are encountered. The task is complicated by a dogmatic attitude on the part of participants toward the viewpoints and ideas of their own groups. To the democratic planner "dogmas" are seen methodologically as "intellectual" attempts to save some privileged position from open collective criticism and modification. How to convert the perception of favored principles by those who hold them from dogmas to "hypotheses" remains a central problem for democratic social engineers.

DEMOCRATIC NORM 5

The Engineering of Change Must Be Anti-individualistic, Yet Provide for the Establishment of Appropriate Areas of Privacy and for the Development of Persons as Creative Units of Influence in Our Society. The "collective" character of our more pressing problems of change has been suggested and the necessity for "collective" solutions affirmed. We have also seen the affirmation of the central importance of persons as basic to the democratic ideology. The fact that these two

requirements are often seen as antitheses stems from a confusion of the ideology of liberal individualism with that of democracy. No complete clarification of the former ideology can be attempted here. A few remarks may help to justify the statement that a democratic methodology must be anti-individualistic. In the liberal revolt against social restraints upon economic enterprise imposed by medieval culture and later against "mercantilist" restraints, a rationale for individual rights was sought in a conception of the "natural" as over against the "social" grounding of such rights. Individuals, naturally equipped with mind and conscience independent of social experience, were set over against a contractual and artificial system of social relationships and conventions. What was in fact an alternative social ideal was thus projected into a theory of the nature of human nature. Scientific studies of human nature have indicated that this rationalization of liberal ideology involved a false psychology and anthropology. Individual personalities are now seen to be products of social experience. Individuation and socialization, far from being capable of intelligible opposition, are generally regarded as alternative aspects of the same process of growth into the ways of a social culture. The norms and standards by which a person thinks and judges are learned in the processes by which he is enculturated. Human rights and duties are grounded in the institutions and ideologies of a culture, not in a nature independent of man's social relationships. If human rights are to be guaranteed, they must be guaranteed by appropriate social, political, and economic controls of human behavior, not by opposition to these.

The value of creative individuality which the liberal ideology as well as democratic ideology emphasized is valid as a value. But the conservation and extension of this value cannot be effected by reliance upon a false psychology and anthropology. If the realization of this value is blocked by certain social arrangements, as undoubtedly it often is today, the task is to change these social arrangements. And such change today requires collective planning and action, not reliance upon "providential" processes of natural or historical selection which have ceased to be providential under conditions of advancing industrialization or upon blind resistance to all collective action as inherently opposed to individuality.

Individualism today tends to threaten rather than to promote the values of individuality. We are brought back to processes of planned

social change and to the formulation of an adequate methodology of social engineering as a necessary condition for the conservation and extension of democratic values.

The methodological correlate of individualism which democratic ideology leads us to oppose is the elevation of unchecked private, individual judgment as an ultimate arbiter in the control of human conduct. That a wise social policy will establish areas of privacy for persons and voluntary associations within the society is undoubtedly true. In such areas, private judgment may rule. But the determination of the proper boundaries of these areas must, in an interdependent society, be based on a collective judgment. The rights of private judgment can be defensibly defined and enforced on a democratic basis only by processes of collaborative planning. They cannot be guaranteed by dogmas concerning the nature of man.

The methodology of planned change which is consistent with democratic ideology must elevate informed and experimental collective judgment over unchecked private judgment. A methodology of training for participation in planned change must emphasize the development of skills necessary for creating common public judgments out of the disciplined conflict of "private" points of view. It must develop persons who see non-influenceability of private convictions in joint deliberations as a vice rather than a virtue. It is in this sense that democratic planning for change must be anti-individualistic.

It is equally important that groups and organizations be trained to develop standards of acceptance of individual differences and of expectation that out of such differences resources for group and institutional improvement can be developed. Groups and organizations should be helped to define and redefine those areas of life in which common values and standards are necessary and where efforts to build common out of contrasting beliefs and practices are required. In the same process, areas of life where divergence in standard and belief is not alone to be tolerated but encouraged and supported need to be well-defined. To stress the essential character of certain universals in group life is in no way to contradict the need for special and unique developments where threats to common welfare are not involved. The democratic social engineer seeks to establish and support this essential distinction in the groups or organizations with whom he works. . . .

An attempt has been made to show that there is no incompatibility between an engineering approach to the solution of educational and

social problems and the ethics of democracy. On the contrary, it has been urged that the effective maintenance and extension of democratic values in industrial culture requires such an approach. The necessity for planned changes in human relationships and institutional patterns stems from the conditions of industrial life today. And planned change requires leadership by persons equipped with the understandings, skills and techniques of the social engineer. Social engineering will serve democratic aims and observe democratic scruples and standards only if it is guided by a methodology which incorporates basic democratic values as procedural norms. The first task of believers in democratic ethics is, therefore, the theoretical job of translating democratic values into methodological norms for the control of processes of planned change. The second task is the practical one of devising ways, in training teachers or others as social engineers, to develop the skills and techniques for effective stimulation and induction of change in persons and groups and the social-psychological knowledge required for accurate diagnosis of change-situations in *integral relation* to developing commitments to the norms of democratic methodology. Knowledge or skills or techniques divorced from the ethical and methodological controls of democracy may be used for promoting undemocratic or anti-democratic ends. We must find ways for teaching the techniques of social engineering not as isolated "bags of tricks" but as the "hands and feet" which the ethical and methodological "heart and head" of democratic action require in today's world.

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part seven

MAKING THE MOST EFFECTIVE INTERNATIONAL CONTRIBUTION

It is difficult for one who has observed the efforts toward modernization being made in a variety of emerging nations not to be impressed by the emphasis given to education in most of them. This emphasis reveals itself in many ways. It is to be seen in the explosive expansion of the number of schools. It is to be seen in animal sheds converted into "schools," which are packed with classes of sixty, seventy, or a hundred eager pupils, often coming in double shifts. Increasingly it is to be seen in night schools, school by radio, or the now almost ubiquitous correspondence or "tuition" course. It is to be seen by the growing proportions of both public budgets and gross national income being devoted to formal education. It is even to be seen in the salaries of teachers that, although depressingly low as absolute measures of their contribution, often represent percentages of national income or product that dwarf those in our own nation. But no matter how impressed one may be with the

efforts and sacrifices being made locally one must be equally impressed with the need for help from external sources—help that must be reckoned in finances, qualified personnel, and new educational ideas.

The need for external assistance to education in the developing nations is being met in a number of different ways, a few of the major ones of which we examine in this part. Aid giving agencies fall into two broad categories, the multinational and the national. A number of countries, for example the United States, give educational aid through multinational agencies and national agencies. United States' contributions to education through the United Nations and its specialized agencies such as UNESCO and the World Bank are examples of the former. The considerable activity of the Agency for International Development in overseas education is an example of the latter.

In chapter 14 we turn first to problems of international financing of education, following which we look at how one country, Nigeria, is using external financing in its educational plan. The Ashby report points to the importance of technical assistance in educational development. In John F. Kennedy's speech on the Peace Corps, we have a description of another type of technical assistance. All persons who work in technical assistance programs assume certain social roles, the understanding of which is important to the success of the enterprise. The selection by Ruth and John Useem and John Donoghue explicates, in a way it is impossible to do in this brief introduction, both the problems that Americans have encountered in providing educational assistance overseas and the types of preparation and approach that appear on the basis of experience to give most promise to increasing the effectiveness of our efforts.

America's favorable stance for offering the needed aid in education stems not only from its relative affluence but equally from its peculiarly relevant inheritance in terms of educational viewpoint. This is not to say that Americans today accord education a "higher" prestige than do citizens of other nations. It could even be argued that quite the opposite is the case. The prevailing American attitude toward education is certainly not one of reverence but rather one of respect. More than that, it is an attitude of the kind of respect that must be earned—a respect that still constantly demands that schools prove their worth

through services rendered. The grounds on which this respect has been earned in our past were partly political and social, developing in a context not altogether unlike that in many developing lands. We have had experience in using our schools to weld a variety of peoples into one body politic, an experience in which we are learning new lessons daily as schools attempt to bridge racial chasms in large portions of our land. Equally significant, the American schools have for the last century had a practical and vocational emphasis; they recognize that preparation for making effective occupational contributions is a crucial part of the education of the citizen. Our educational system has, thus, for many years been recognized as an instrument for economic development in the broad sense. In short, education has been regarded by Americans not as a closed system but as an agency of democratic public policy, relevant to the social context of the times, to the recognized needs of the nation, and to the practical contribution expected of its recipients. The kinship between this basic American orientation and that, enunciated but as yet not worked out, in the developing nations is clear.

Despite this similarity of orientation in principle, our limitations have proved legion as we have attempted to provide personnel, ideas, and institutions that would make a positive contribution to development in emerging nations with very different cultures. Partly our limitations have arisen because educational experts, as others, usually understand enunciated philosophies best in terms of the specifically contemporary American implementations with which they are familiar. The fields of vocational education, of which the American practice, perhaps, deservedly receives credit, might even be used as an example. Only the extreme advocate of the universal value of "liberal" or "classical" education would deny the urgency of improving vocational education in the newly developing lands. This would seem an excellent field in which to apply our famous American "know-how." And yet it has sometimes been in the fields of vocational education that efforts to institute well-established and "proven" programs or techniques have proved most abortive. As we pointed out earlier in this volume, vocational agriculture schemes that might work well where youngsters possess the land or the credit to get started come to naught in situations characterized by certain types of land tenure, by reverence for custom,

or by unavailable capital or credit facilities. Technical or skill training schemes that might work well in societies already possessing a class of small entrepreneurs and employers, as well as available capital for starting artisan establishments or small industries may when these are lacking easily prove merely another form of education for frustration.

This is not to say, of course, that all American "know-how" must be viewed as irrelevant or that the usual professional competence and skill are unneeded by the overseas educational expert. Rather, it is to suggest that the American contribution to educational development requires an *additional* type of "know-how"—the ability to relate education to quite different human and physical environments. To suggest what is meant by the ability to relate education imaginatively to such different environments, we might mention the technical education program being carried on under American auspices in West Cameroon. Here in a society lacking both a skilled trade/entrepreneur class and means of credit or capital formation for small business, the usual conception of what constitutes the function and scope of technical preparation has had to be altered. In part this had involved broadening the technical trade curriculum to include needed business knowledge. But, more importantly, it has meant that the school must assume the responsibility for building bridges over the chasm that separates graduation from productive employment: in this case using the school as a prime contractor, which subcontracts to recent graduates who are attempting to get a start on their own, and providing graduates not only with skills, knowledge, and diplomas but with the actual technical tools required to practice their trade. Adaptation to social systems in transformation frequently requires just such modification of the very notion of what a "school" is. Similarly, as important as American expert "know-how" may be in such areas, for example, as programmed learning, if it is to assist education in emerging nations to take the necessary leap forward, it will not be through the existing products of that "know-how" but through the ability to adapt that "know-how" to startlingly new requirements.

For some time American assistance has itself gone through a developmental phase, too often characterized more by good intention than by sound theory or practice. As John Galbraith

commented a few years ago, "it must be borne in mind that the present procedures on foreign aid in a very large number of countries are acceptable only because we have so resolutely avoided measuring the results." In the past few years our vague uneasiness about inadequacies in our overseas assistance for development has become far more clearly focussed through reappraisal. More critical analysis has to some extent brought a recognition that assistance, to be more than spuriously developmental, must rest upon consistent and coordinated policy, carefully formulated and pursued over a reasonable period of time. Whatever short-term diplomatic benefits may (or may not!) result from "establishing a presence" through the construction or staffing of inapposite schools or other institutions, these are little apt to contribute to sound, long-term development even if requested by the recipient government and scrupulously designed so as not to disturb the cultural "sphere" of some other friendly donor nation. Increasingly the need for coordinated planning, which relates economic, educational and social policy so they support each other, is being recognized as the only sound developmental approach.

The same reappraisal that has brought recognition of the need for consistent policy has placed new emphasis on the selection and training of personnel capable of formulating, administering and implementing any such policy. The case in terms of American national interests and objectives has been well stated by the Perkins Committee in its proposal for a National Academy for foreign service as follows:

The formulation and conduct of our foreign operations requires teamwork among expertly trained professionals highly skilled in their specialties and management by broad gauge experienced individuals with both diplomatic and executive competence. To the task of recruiting this precious talent, preparing it for domestic and overseas service, and keeping it modernized, current, and vital we should be bending our best energies. We have not done so.

Specifically our training and educational programs have not kept pace with three basic changes in the nature of the tasks to be performed by officials who operate our foreign programs.

The first change is the interdepartmental nature of foreign policy formation and the necessity for closely coordinated team operations overseas. In spite of these increasingly obvious facts of life, our public

educational and research programs are essentially parochial in character—with understanding and vision limited by departmental and jurisdictional walls.

The second change is the vast expansion of our foreign policy operations in two directions from traditional, polite state diplomacy: On the one hand, in the direction of the U.N. and other international public forums, on the other hand, in the direction of oversea activities projecting our officials into local matters, ranging from village water supply and local educational developments to quasi-military and conventional military programs aimed directly at countering Communist insurgency. The third change is the need, occasioned by the threat of continuous pressure from Communist state and ideological interests, for carefully prepared strategy and tactics focusing equally on preserving societies from communism and on building stable, democratic progressive states. This is the problem of modernizing while preserving internal integrity. Institution building for these dual objectives required U. S. public servants who combine broad comprehension with specific preparation for the particular task to be undertaken.

These three changes create educational requirements which should be massively reflected in our educational and training programs in support of foreign operations.*

Insofar as our aims and those of the recipient nations seeking development coincide, these conditions and the requirements they impose reflect the need for new emphasis on broad training and preparation, a consideration that is amplified intermittently throughout this part.

Although most of the following selections are pointed more specifically at educational assistance than is the Perkins report, they reflect a similar concern with “building stable, democratic, economically progressive states.” The distinctive American educational resources for development and mobilization of such resources through its educational institutions cannot be more than illustratively suggested in this brief compass, but the selections from Bell and Gardner highlight some of those resources, institutions, educational ideas, and personnel that constitute part of America’s potential and actual contribution to developing lands.

* *The Report of the President’s Advisory Panel on a National Academy of Foreign Affairs* (Washington, D.C.: Government Printing Office, 1962), p. 1.

chapter 14

External Aid to Education

14-1. Prerequisites for international loans

"Educational and training needs for economic development are being systematically determined to serve as the basis of international financing of education."

GEORGE TOBIAS

When the International Bank for Reconstruction and Development (World Bank) made the decision to enter the field of educational financing, a new level of recognition of the role of education in development was reached. The Bank's action, in view of its carefully built reputation for prudent money management in the development field, gave an additional and significant sanction to programs for educational investment. Its recognition that education is indeed a worthy claimant for international financing has set off a chain reaction both for lenders and educators, the end of which will not appear for years to come.

Probably not least among the reactions to the Bank's decision to enter the field of educational financing will be a very close scrutiny of the educational systems of those countries applying for loans. Teachers, buildings, programs, and financing will all be major concerns of the Bank. Nor will its study and concern be limited to education as narrowly defined. Of concern will be the total commitment of the country to education and its interest

in sustaining and improving it. As George Tobias observes in the selection that follows: "International financiers will want to test the capacity of the educational organization to plan, to innovate, manage and utilize what it already has." The process itself of preparing a loan application can, for the borrower, provide an opportunity for strengthening the educational system through intensive examination of its strengths and weakness and determination of how it can best be improved.

In this selection Tobias, member of the Bank's education staff, explains the Bank's position on investments in education and its expectations of potential borrowers. Comments Tobias: "Educational projects suitable for international financing do not exist in a vacuum. They must be compatible with the economic and social environment. To win support, an educational project must advance the borrower's total development purposes."

[George Tobias]

There is nothing new in a country's seeking help from abroad to meet part of its educational costs. Such help has long been available in the form of loans and grants of money and of personal services from overseas. The first teaching missionary to arrive on a foreign shore represented a capital import for educational purposes. If, historically, the foreign contribution was in kind rather than in cash, it was nonetheless welcome and nonetheless a supplement to the recipient country's domestic budget for education.

Organized fund raising, usually private, for help to educate the backward peoples was known in the 18th Century. Many underdeveloped lands depended on foreign philanthropic foundations, especially for higher education, before World War I. Bilateral programs, government to government, were substantial even in the 1920's. Today more than 35 countries are helping to educate the children of other countries by supplying teaching materials or teachers or

George Tobias, *Problems in International Financing of Education*, UNESCO-ECAFE Regional Technical Assistance Seminar on Investment in Education in the Countries Participating in the Karachi Plan, Bangkok, April 6-13, 1964 (Paris: UNESCO, 1964), pp. 1-11.

fellowships or equipment or cash in the form of grants and loans. They are joined by literally hundreds of philanthropic organizations and foundations which also export educational assistance. The coming of the United Nations and especially of its Expanded Program of Technical Assistance, developed permanent machinery in a formal structure for collective educational assistance on an international basis.

Nor is there anything new in the demonstration that education and training are worth more to society and to the individual than they cost. To be sure, not all of the statistical issues of determining cost-benefit ratios have been resolved, nor all of the proper accounting relationships confirmed. There is still room for experts to dispute whether the aggregated annual current costs of education in the U.S., for instance, are closer to 16 billion dollars or 65 billion dollars. Nor is there agreement in how much of the cost is chargeable to investment and how much to consumption. It is remarkable, nevertheless, and society should be grateful that the parents of the very scholars and experts now contending on the precise economic value of education acted, perhaps unscientifically, intuitively, emotionally, but nevertheless correctly, when they decided to keep little Johnny out of the labor force for yet another year and to send him back to school. Those parents uninformed on the subtleties of opportunity cost accounting and shade pricing, clearly made the right decision that led to greater economic output by their sons because of their education and training repaying their education cost.

Nor, again, is there novelty in governments' undertaking to meet the capital costs of educational plant and equipment by borrowing long-term money against a general pledge of government credit. Governments have long set aside or pledged their general credit (as well as specific revenue sources) for specific educational costs. In Britain and on the Continent the set-asides were often in the form of revenue-producing lands whose income could be used by universities. In the U.S., since 1862, productive national lands have been distributed among state universities (the land-grant colleges) as a source of funds for both their capital and recurrent needs, in exchange for the agreement that the universities would give practical instruction at university level in agricultural, mechanical and scientific disciplines and in military training.

Borrowing to meet educational capital requirements is standard practice in the U.S. In each of the last five years, more than \$2.5

billion has been borrowed by states and municipalities to meet the capital expansion costs of primary and secondary schools alone, with great additional sums being lent for the expansion of higher education facilities. Typically, such funds are raised in the ordinary money market, from investment banking institutions by normal underwriting procedures, standards and fees, and against the pledge of the general credit and general revenue of the borrowing municipality for debt service. U.S. municipal school bonds are as attractive to individual and institutional investors as are any other issues of the borrower; they compete successfully in U.S. money markets with other issues as to yield.

Thus these three concepts are not new:

- (a) that there is an attractive economic return from investment in education and training designed to satisfy labour market requirements,
- (b) that money to meet the capital costs of education can be raised by long-term borrowing against government credit, and
- (c) that such capital can be sought abroad as imported capital.

A new departure

What is new is that governments are now undertaking coherent, balanced, articulated human resources development plans. Educational and training needs for economic development are being systematically determined to serve as the basis of international financing of education. Sums available for international investment in education are now much greater than in the past—but, paradoxically, the money may be harder to get hold of than ever before. The very size of these funds causes sharp pangs of apprehensive caution in those responsible for the money. Nothing in man's experience quite so much as big money greets its seeker with such maidenly shyness and demure insistence on reiterated reassurances that everything is going to turn out all right.

Education, already the biggest single employer in underdeveloped countries, may be expected to grow bigger. As countries become more affluent, or more industrialized, or both, more children are educated, at higher standards of instruction, to higher levels of education, with greater capital inputs per child, and lower student-teacher ratios.

But, in devising a manpower development plan, it is possible to

anticipate perfectly the requirements and outputs by occupation, area and industry, and to assure full utilization of the present labor force so as to provide a balanced educational plan? At this stage of the game, such precision is probably not possible, but equally, all economic planning is experimental and approximate. Development plans flow from a series of successively closer, complementary estimates. Erected on partial and sometimes contradictory data, development plans are advocated on the basis of unproven social and political theories, assumptions and hopes. Proposed by economists, they are disposed of by politicians. Typically, some of the funds for the plans' fulfillment are to be drawn from external credit sources, usually unnamed or uncommitted, or from domestic revenues hitherto uncollectible or not yet written into law. The plans are to be implemented by private enterprise and by government administrators and professionals of all types, who are not yet trained and who will always be in short supply. Many of the agencies supposed to carry out the plans often are not yet established or else are sadly in need of reform. And yet, plans are being put together by—and for—capitalist and socialist countries, primitive and sophisticated societies, more developed and less developed economies, with high hope and with dogged determination. Man power planners can take comfort and courage from the company they share.

The IBRD and education

In September, 1962, Mr. Eugene R. Black, President of both the International Bank for Reconstruction and Development and the International Development Association, stated to his Board of Governors,

Nothing, I believe, is more vital to the economic progress of the underdeveloped countries than a well-rounded spread of education, and the Executive Directors, as well as I, myself have become convinced that here is a field in which the Bank might make a useful contribution.

In October, 1963, to a similar audience, Mr. George D. Woods, present President of the Bank and IDA, states,

In particular, I believe that we will have to do more to help create the facilities necessary to the spread of education. Education

is, of course, a valued end in itself, but it is also of central importance in the whole development process. . . . IDA, as you know, already has made one credit for school construction in Tunisia and is considering similar credits elsewhere. I believe it would now be appropriate for the bank, too, to lend for school facilities of high economic priority.

These announcements represent trail-blazing ventures into international educational financing. To many people, the Bank/IDA's announcement of its readiness to examine proposals for educational development represents a profound change in the climate of educational financing, significant far beyond the probable sum of money that might be planned. Why should this be so?

The Bank's reputation assures it of an attentive audience in the financial community. Its announcement established the propriety of long-term capitalization of the costs of education. The Bank's own lending experience had demonstrated that economic development projects often cannot be devised, or if devised, cannot be efficiently operated without the trained executives, engineers, technicians, and administrators so sadly lacking in the underdeveloped countries and, indeed, not abundant anywhere. The only adequate answer is for the underdeveloped jobs, because it is neither economically nor politically feasible to depend permanently on expensive expatriate personnel to manage one's affairs.

Without a home-grown supply of high-level man power, economic projects suitable for Bank/IDA support continue to be difficult to develop. Typically, when the Bank/IDA undertakes to finance an industrial undertaking, it also makes certain that technical assistance and expert support of all kinds are provided so that the project does not falter. The inclusion of educational projects in the range of its lending gives borrowers reassurance that education, too, would be supported to achieve its mission.

As one of its first undertakings in the educational field, the Bank joined with UNESCO to establish an International Institute of Educational Planning with a financial contribution from the Ford Foundation to develop and supply educational planning techniques and methods to underdeveloped countries. With a distinguished Board of Directors to guide its work, the Institute is now reviewing areas where new research efforts or new interpretations of older findings, can shed light on the pathway that educational programs in developing countries might best take. Also, in recent time, IDA has

made credits available to Tunisia and to Tanganyika for secondary school construction. Other projects for educational loans and credits are under active and advanced consideration within the Bank and IDA. It is noteworthy that, coincidental with the Tunisia IDA Credit, the Bank also granted a substantial sum for the engagement of research architects and school administrators to devise school building standards for Tunisia, so that maximum economy and efficiency would be realized in future school building expenditures in that country.

Bank loans and IDA credits

... Over the years, Bank practice in other kinds of lending has come to be accepted as a desirable, if not always an attainable norm, by other lenders. Bank practice tends to set the standard of performance demanded by many other international lenders. If that precedent is followed in educational financing, Bank/IDA standards may become those adopted by other educational lenders. Here are some observations on those standards:

Foreign currency requirements are usually only a small part of the cost of education. The basic capital, and almost all the recurrent costs, will have to come from local resources. It is useless to lay out capital for education unless there is a dependable local source of revenue for operating expenses. Prospective lenders need to be reassured that operating costs can be met, and also that having funds earmarked for education will not cripple some other equally important effort of the government.

If education is eligible for especially long-term borrowing, it is on the ground that the full benefit from education is delayed until its products mature and until productivity in the labor market rises. However, it does not necessarily follow that every credit for education must be for 50 years if the borrower can repay it sooner. For example, before a 50-year loan for secondary schools would have been retired, a boy of 18 would have reached his peak of productivity and have declined into retirement at age 68, with his son and even his grandson well over the hump of their highest rate of productivity and still paying for Grandfather's education.

An educational project is going to have to make its own case convincingly to win the approval of banking institutions, which view education in terms of its economic and investment value. Education

will have to compete for an allocation of resources, both internal and external, against lively, imaginative, more conventional forms of capital use, such as power, transportation and agricultural improvement. Educational borrowing will not only have to overcome the advantage of custom and familiarity which the other capital users enjoy but will have to show an attractive rate of return on its own.

Education plus training

The best friends of educational investment often weaken their own case by claiming too much for education. As a capital asset, as a tool of production, formal education and training in the classroom represents only one sector in the spectrum of human resources development. Formal education and training has done its job if it makes the student a "trainable" individual, more apt to perfect his professional and technical competence in the labor force than he would have without such formal education. Preparation for effective labor market participation begins with the child at home and is carried no more than one long step forward by his educational experiences and the discipline of reckoning and reasoning required in the classroom. But it is from his colleagues and superiors that the worker ultimately acquires full competence in his trade or profession. A well-rounded human resources development program, to attract capital support from banking institutions, will have to include programs planned and carried out to assure the necessary mobilization, utilization, motivation and training of high-level human resources as well as their formal classroom instruction. Doctors and surgeons must complete internships and residencies; lawyers must complete clerkships; engineers pass through apprenticeships, under one name or another. Executives and administrators are "finished," and competence in making decisions and in directing a staff is acquired only after years of supervised control and on-the-job training. The hallmark of a profession is the requirement that the practitioner pass through successive levels of attainment after entering the profession, based on the judgment of his peers, after training by his peers. When the costs of long-term, on-the-job training are added to the costs of formal education and income not earned while the student is in school, the cost-benefit ratio of formal education obviously becomes smaller than only the classroom costs divided by the worker's later increase of earnings.

Training plus culture

At the same time, it is clear that education is both an integral part of a total culture and an item of consumption, highly valued for its own sake. It is in a real sense the objective as well as the engine of economic development. It is neither desirable nor possible to regard education merely in its utilitarian role of an instrument of production. We must balance utilitarianism against the civilizing function of education and its contribution to preparation for citizenship. The tendency toward ever greater occupational specialization by the student at an ever lower age may one day defeat itself, since this process makes it more and more difficult for specialists to communicate with each other. In the under-developed countries, this prospect is still remote, but there is need now to decide the balance between traditional and vocational orientation of education. The traditional functions of education (to preserve the continuity of a civilization and to help develop cultural identity) cannot be ignored. On the other hand, if a society is to move into the Twentieth Century, too much emphasis on the past in its educational processes would be a mistake. Education should fit harmoniously into a chosen pattern of change, progressive enough to produce the technical leadership required, while at the same time not isolating from the mainstream of the national culture those who are privileged to receive higher education. The elite may acquire a modified professional outlook and new skills within one generation, but as human beings its members cannot readjust that quickly so as to skip many decades of slow evolution. Educational planners must blend the hard-headed and businesslike approach with sensitivity and imagination when they teach a people to swim in cultural, social and economic cross-currents.

An aspect of economic development

International financiers will want to test the capacity of the educational organization to plan, innovate, manage and utilize what it already has. Every country in the world already has an educational system of one sort or another. A reasonable test of how well borrowed funds will be utilized for extending the system can be made by examining how well present funds are being used for running

the system. International lenders wish to examine not only internal controls, methods, standards and procedures of the educational system over its own domestically derived resources, but they will also want to make sure that education planning is properly related to the country's total economic and social development programs, both public and private, and that the educational system is flexible enough to accommodate to changing needs and new methods.

Educational projects suitable for international financing do not exist in a vacuum. They must be compatible with the total educational, economic and social environment. To win support, an educational project must advance the borrower's total development purposes.

Lenders will want to be sure that proper teaching and administrative staff are available for the operation of educational projects. Schools in many lands stand empty or are poorly utilized because the building program ran ahead of the supply of teachers and administrators to use the facilities.

Lenders will want assurance that both education as a whole and the specific project under review have a priority demand upon the borrower's own resources. Tests may be made of the extent to which the borrowing country is allotting its prospective gross national product to education, but what is more significant is the extent to which a government's current realized revenues are allotted to and spent on education. Another clear test of priority attached by the borrower to a given project is an appraisal of what kinds of desirable projects have been deferred to make room for the project under review. . . .

Banks wish to be assured that the capital to be put in place is not beyond the capacity of the borrower to utilize effectively, to complement with necessary operating costs, personnel, etc. Prospective borrowers are competing in capital markets—a lender will not wish to see his funds tied up in educational loans which cannot be effectively utilized because of a borrower's inability to provide operating expenses and staff, especially at a time when other worthwhile projects have been deferred or set aside to make room for the educational borrowing.

The labor market

Lenders for educational projects will wish to be assured that the students, to be turned out by the education proposed, are genuinely and urgently needed in the labor market to satisfy nondeferable

and irreducible requirements to carry out economic development. Education, the biggest single "industry" in underdeveloped countries, in terms of capital invested in plant and equipment, in terms of payroll and in terms of employment, is engaged in the production and distribution of learning, at a price, for a market. Students will have to be trained so as to perform specifically those tasks that have to be done. Banks tend to look upon real labor force need as the ultimate justification for borrowing for educational expansion.

Better management and utilization of the present labor force, by organizing the work in accordance with skills available, in many cases will reduce substantially future requirements for highest level manpower—with consequent reduced educational and training costs, higher productivity, improved job satisfaction and wider participation in economic development of workers with lesser skills.

How is the present labor force in the key occupations utilized? How productive? Is there lateral mobility in the labor force that permits workers to shift from one occupation to others, utilizing a similar level of attainment? What is the hiring employer's attitude toward the value of the education and training being given in schools and colleges? How mutually respectful are the educational authorities and the employing establishments? These are questions that lenders will want to be informed upon. (Incidentally, lenders have a continuing interest in assuring that economic projects in which they, themselves, have invested operate without impediment because of high-level manpower shortages, oftentimes, international lenders are most aware of manpower stringencies in a borrowing country, especially in executive and technological occupations.)

Nor are lenders likely, in the long run, to be impressed only because projects have tags attached calling them "technical" or "vocational" education. Technical and vocational education is simply that form of education which equips the student for a specific kind of occupational pursuit—medicine, law, engineering, executive management, communications techniques, metallurgical techniques, etc. Unless the market is clearly and urgently in need of these "rifle-educated" students, lenders are not likely to be impressed with euphemisms describing the education as technical or vocational if it is unrelated to the realities of the labor market.

If education is an industry for the production and distribution of learning, its raw material is the student intake. If the educational project is to help economic development, the student intake must be

suitable for the indicated occupations. Lenders will be interested to see the ratio of drop-out and repeating of work by students as well as their performance on examinations to assure that they can be developed toward the occupational objectives proposed by the project.

Projects in evolution

The perfect school system has not yet been devised—every curriculum in every school system represents the point at which come to rest a temporary balance between educational technique, level of culture and aspiration, and the facilities available for education. The financial community will wish to participate from the earliest stages with the responsible educational planners in order to assure that a given educational proposal is reasonably calculated to advance economic development without undue infringement of the other objectives of education which educationalists will wish to protect and preserve.

At the university and technical level especially, educational systems have a research and development responsibility to the community. They serve as research centers, centers of learning, centers of "organized worrying," to which the community's complex questions of all kinds can be referred. Poor countries have few educated people. A few hundred educated persons in centers of learning, working together on the real and current problems of the nation, can make a great difference in the rate and direction of its economic growth.

The educational plant and equipment itself will surely come under the scrutiny of the lender who will want to assure himself that the physical plant is sensible and practical, while providing some elements of grace and intellectual environment. The structures must be "machines for teaching" rather than simply shelters against the weather. The structures ought to be sturdy—they ought to outlast the amortization period. Too cheap is not cheap at all. The standards of housing and amenities of students and of staff will be closely examined. Borrowers would be well advised to minimize the luxury in these two forms of expenditures, even though, of course, population distribution and the need to combat discrimination require many institutions to build housing and social centers for students. Moreover, the need to compete internationally for teachers requires certain amenities to be provided for the teaching staff.

Conclusion

We have come to the point where the benefits of education for economic development are universally recognized. The propriety of long-term financing of educational growth is accepted. The availability of external aid for such financing increases. It is necessary for the dialogue between educational borrowers and lenders to continue to grow closer and more confiding at all stages of educational planning, so that the requirements of each will be the better understood by the other, so that their common objectives of human resources development are not obscured behind the historical distance between the two groups, or made inarticulate because of their separate esoteric vocabularies.

14-2. External aid in a country plan

"We believe that Nigeria has an admirable case to present to governments and to private sources of financial help."

THE ASHBY REPORT

The extent of educational aid that could be used in the developing nations is virtually incalculable. The growing realization that direct investment capital is not the only missing ingredient in economic development has been accompanied by an ever-increasing willingness to assist education in the emerging nations through technical assistance. The extent of this awareness by the American government can be seen in the 1963 budget of the Agency for International Development, in which over \$170,000,000 was earmarked for direct educational assistance (educational personnel and university contracts), and nearly a half a billion dollars went into all types of educational programs. Additional direct assistance provided under such auspices as USIA, the Peace Corps,

and the Fulbright Act makes the amount even more impressive, even while indirect American aid through our share in financing multilateral educational programs such as those of UNESCO is most extensive. Indispensable as the financial aspect of our contribution is, it is not sufficient; education for development requires not only dollars but also, even more urgently, the qualified personnel and new ideas that hopefully these dollars can provide.

Illustrative of the extent of need for the second ingredient, trained educational personnel, is the report of the prestigious Ashby Commission, which was made to the Nigerian government at the time of Nigeria's independence. Recognizing that in order to place its educational and manpower training on a self-sustaining growth basis, it needed teachers, the Commission advanced its LEAP proposal, calling for an interim recruitment program for foreign graduate teachers during the first decade of independence—a period which it was estimated would give Nigeria time to begin producing its own graduate teachers in sufficient quantities. The LEAP proposal called for the recruitment of one thousand overseas teachers a year, and the Peace Corps is now providing nearly half this number. (Fortunately, the Commission was overly conservative in estimating Nigeria's potential for producing its own graduate manpower, and the exciting development of Nigerian higher education promises to provide eight hundred graduates per year in half the time foreseen by the Commission.) Important as our contribution to Nigeria and other nations has been in providing dollars and qualified personnel to fit into existing systems, we have only begun to find ways of providing the third essential ingredient for educational advance: the production and stimulation of ideas apposite to new situations, a dimension that is explored explicitly in a subsequent selection.

[The Ashby Report]

We propose a rate of investment in education which far outstrips the probable growth of Nigeria's economy by 1970, Harbison's estimates assume a 4 per cent per annum increase in national income in the coming decade. We propose almost to double the number of primary school pupils, almost to quadruple the number of students in the secondary schools, and to multiply by more than five the present number of university students in Nigerian institutions. Expansion of education is already well under way. Continuing even the present rate will in a few years place a crushing burden on the nation's economy if Harbison's 4 per cent assumption is correct. Yet we have to propose a still greater rate of increase if Nigeria is to have available the skilled manpower needed to fashion the future we foresee by 1980. We must, therefore, recommend a programme that cannot be financed on a pay-as-you-go basis, however much Nigeria is prepared to sacrifice other services on behalf of education.

We do not make our proposals lightly, or without regard to these economic realities. But if the facts of national income have to be considered, so also do the facts of economic growth. In the modern world economic advance depends on skilled manpower, and the manpower must come first. Investment in Nigerian education is therefore an investment in her economic future and political stability, and as such may command international attention.

We believe that Nigeria has an admirable case to present to governments and to private sources of financial help. Its commanding position in population makes it an African giant among new nations. It has demonstrated its ability in self-government and it is a natural focus of attention in a continent to which the eyes of the world are turned. To invest in Nigerian education, which is the necessary first step in strengthening the economy, is therefore wise policy for nations or groups or individuals who care about the shape of the future. We recommend that the Federal Government explore the possibilities of international aid to help to carry out the recommendations of this Report.

"International Aid," *Investment in Education*, The Report of the Commission on Post-School Certificate and Higher Education in Nigeria (Nigeria: Federal Ministry of Education, 1960), pp. 35-36, 38-39.

Graduate teachers for the schools

To meet the needs of primary and secondary education, we recommend that first priority be assigned to the provision of graduate teachers for all post-primary schools secondary, technical institutes, teacher-training colleges, sixth forms, teacher-guidance service. By 1970 Nigeria must have skilled manpower available and also the teaching force needed to support the education of succeeding generations. This step must be taken soon if the 1970 target is to be reached. Certain skills can be taught quickly to students, but there is no way of speeding up the true education of man. Good teachers must be available in large numbers during the 1960's. But, as we have reported earlier, there is already a serious shortage of qualified teachers; and there are simply not enough of them available for any appreciable expansion of secondary and post-secondary education.

The pump, in short, will have to be primed. Teachers will have to be imported, while Nigerian students are being trained to take their place. Since imported teachers are more expensive than nationals, it is economically sensible to keep the number of those imported as low as possible, and to train their successors as rapidly as possible. But, as we have pointed out earlier in this Report, quality in the teaching staff is needed if highly trained manpower is to result. Quality takes time to prepare, and must have precedence over speed or political convenience. Graduate teachers from abroad must be found.

International aid must therefore be sought in men as well as money. The nations of the world that enjoy a margin of safety in skilled manpower should be asked to make available a small portion of this group for a decade to teach in Nigeria's schools. At the same time, as she awaits the growth of her own universities, Nigeria will have to send large numbers abroad to be trained as teachers. The co-operating nations would therefore have to be asked to provide places in their universities, but if these intending teachers are distributed over a large number of institutions, the burden on any one should not be heavy. We recommend, then, that Nigeria seek aid simultaneously for the recruitment and support of teachers, and for the support and training of Nigerians in overseas universities.

Neither of these proposals, of course, involves a change of present policy. Nigeria now seeks teachers from overseas and through scholar-

ship programmes now supports the training of future teachers. What we propose is a change in scale of operation, based on our estimates of the need for trained manpower.

We do not venture to predict the exact number of teachers that will be needed from overseas between 1960 and 1970, or the number of scholarships that need to be granted. Final decisions on these matters will have to be made by the proper authorities on the basis of the growth of the secondary schools, technical institutes, teacher training colleges, sixth forms and the teacher-guidance service. The rate of growth will depend on many factors which we are not now in a position to assess. But it is possible to set some targets for the need of graduate teachers and from them to estimate numbers and cost. In setting these targets, we have used the following assumptions:

That the secondary schools and technical institutes should be built up rapidly, since they are the source of supply of skilled manpower and of candidates for university study. The total of all post-primary school enrolments, including teacher training colleges, might be planned to increase to 180,000 in 1963, 225,000 in 1966 and 260,000 in 1970.

That existing arrangements will be able to keep the force of graduate teachers at its present strength: i.e., that special programmes of recruitment are only needed for numbers above the present amount.

That the output of teachers from Nigerian universities, as proposed earlier in this Report, will reach only small numbers in 1965 and will not rise to 800 per annum until 1969.

That the ratio of teachers to number of pupils as suggested elsewhere in this Report should be achieved by the end of the decade, and also the proposed ratio of graduate teachers to total staff.

Figure 1, [omitted], shows the increase in graduate teachers that would be required to reach the targets resulting from these assumptions. The numbers, even though only very rough approximations, are frighteningly large. Clearly it will be necessary to adopt policies to fill the gap between the demand and the supply of Nigerian-trained graduates. We have calculated the results of three possible policies to solve the problem:

1. *If imported teachers were used until the supply of graduates from Nigerian universities equalled the demand and if no special effort were made to train future Nigerian teachers overseas.*—There would still be a large gap at the end of the decade. We estimate that it would be necessary to rely on nearly 25,000 "imported teacher-years"

between 1960-70 and if one uses £1,500-£2,000 as a range for annual cost, the total required would be £36-£48 million for the decade.

2. *If Nigeria selected 300 men and women each year for the next seven years to send to overseas universities to train for teaching, in addition to those in training in Nigerian universities.—* . . . It is clear that the gap between supply and demand in 1970 is narrower than would be the case under the first policy. We estimate that roughly 15,000 "imported teacher-years" would be needed, at a cost of £22-£30 million for the decade, and that the cost of training the teachers overseas, at £500 a year per student, would be a little over £3 million, or a total of £25-£33 million for the decade.

3. *If Nigeria selected 600 men and women each year for the next five years to send to overseas universities for training as teachers.—* The gap might be closed before the end of the decade. . . . We estimate that roughly 7,000 "imported teacher-years" would be needed, at a cost of £11-£14.5 million and that £4.5 million would be needed for scholarships, or a total of £15.5-£19 million for the decade.

We must emphasize once again that these figures are useful only to suggest orders of magnitude and relative costs of the several schemes. But even if major changes should be necessary in numbers of teachers or of scholarships, or in the average cost of each, it is clear that the third policy, or something like it, is the most sensible to follow. We recommend that it be studied in detail by the Federal Government and that it be the basis for proposals for international aid.

We are not able to estimate how much of the cost of such a programme could be borne by the Federal and Regional Governments of Nigeria. The personnel costs are only part of the total in any case: school buildings must be put up, equipment purchased, books made available, and in many cases housing provided. Experience has shown the great importance of adequate living conditions in programmes of this sort. We hope that an imaginative architectural solution to needs for temporary housing can be found. Costs will in any case be high. These requirements will perhaps absorb all the funds available to Federal and Regional Governments. We hope not, for it seems to us important that Government should be in a position to assume an increasing part of salary costs as the decade progresses. Nigeria should be able to carry on after the programme is over without a sudden jump in her level of recurrent expenditure for teacher salaries.

The numbers of teachers needed from overseas will necessarily be large in some years. Under policy 3, for example, there might have to

be well over a thousand a year between 1962 and 1966. The great majority will have to be English-speaking, of course, but there will also be need of French graduates and Arabic scholars. The recruitment of so large and diverse a group, and the selection of men and women who will do a good job as teachers in Nigeria, will require a programme of unusual scope and imagination. . . .

Loan and educational aid programme

A programme of international aid of this type can fire the imagination of nations and peoples. We have evidence already of the growing wish to serve Nigeria on the part of youth in the United Kingdom and the United States. Universities too want to help. This practical idealism can be harnessed and put to work, but only by a purpose that is seen to be good and by a programme that seems likely to carry out that purpose. We think that the plan of combining the loan for a few years of university places to train teachers, with the provision of educational aid in the form of teachers and funds, can serve this purpose. We recommend, then, that Nigeria greatly expand her present arrangements by seeking an international Loan and Educational Aid Programme. The verb formed by the first letters of these words suggests the task of the next five years: Nigeria must *leap* ahead, accomplishing in education in a few years what has taken other nations decades and even centuries. It is a cause that should win the support of nations and peoples around the world.

14-3. The new volunteers

"They will return better able to assume the responsibilities of American citizenship and with greater understanding of our global responsibilities."

JOHN F. KENNEDY

It would be impossible to discuss the American educator's contribution to education in the emerging nations without reference to the Peace Corps, a large

proportion of whose volunteers have provided invaluable service as teachers. Although much has since been written and said concerning the Corps and its accomplishments, the late President Kennedy's initial message to Congress proposing the Corps still is a landmark not only as an expression of the goals and nature of this specific program but also as an expression of America's deep sense of responsibility for assisting in the development of the emerging nations.

Little effort is needed to justify the Peace Corps or the contributions its volunteers have made. Its members have filled critical gaps in the understaffed schools of many lands. Often by their imagination, their enthusiasm, and their faith in democratic human relations they have injected new life and a new human dimension into schools that were rigid and ineffectual in providing the type of citizens new nations require. Thus inevitably volunteers have served as "change agents." With the growing momentum of the Corps, recruitment, which has during its early history been largely from those lacking the professional qualifications and experience in education that would enable them to make the most effective contribution at such focal points as teacher-training, may be shifting toward greater enlistment of professionally qualified, experienced, and oriented persons who can make an even more enduring contribution to the self-sustaining growth of the teaching profession and the educational systems in emerging nations.

[John F. Kennedy]

Throughout the world the people of the newly developing nations are struggling for economic and social progress which reflects their deepest desires. Our own freedom, and the future of freedom around the world, depend, in a very real sense, on their ability to build growing and independent nations where men can live in dignity, liberated from the bonds of hunger, ignorance and poverty.

One of the greatest obstacles to the achievement of this goal is the lack of trained men and women with the skill to teach the young and

John F. Kennedy, "The Peace Corps," *Vital Speeches of the Day*, March 15, 1961, pp. 325-327.

assist in the operation of development projects—men and women with the capacity to cope with the demands of swiftly evolving economies, and with the dedication to put that capacity to work in the villages, the mountains, the towns and the factories of dozens of struggling nations.

The vast task of economic development urgently requires skilled people to do the work of the society—to help teach in the schools, construct development projects, demonstrate modern methods of sanitation in the villages, and perform a hundred other tasks calling for training and advanced knowledge.

To meet this urgent need for skilled manpower we are proposing the establishment of a Peace Corps—an organization which will recruit and train American volunteers, sending them abroad to work with the people of other nations.

This organization will differ from existing assistance programs in that its members will supplement technical advisers by offering the specific skills needed by developing nations if they are to put technical advice to work. They will help provide the skilled manpower necessary to carry out the development projects planned by the host governments, acting at a working level and serving at great personal sacrifice. There is little doubt that the number of those who wish to serve will be far greater than our capacity to absorb them. . . .

Among the specific programs to which Peace Corps members can contribute are: teaching in primary and secondary schools, especially as part of national English-language teaching programs; participation in the world-wide program of malaria eradication; instruction and operation of public health and sanitation projects; aiding in village development through school construction and other programs; increasing rural agricultural productivity by assisting local farmers to use modern implements and techniques. The initial emphasis of these programs will be on teaching. Thus the Peace Corps members will be an effective means of implementing the development programs of the host countries—programs which our technical assistance operations have helped to formulate.

The Peace Corps will not be limited to the young, or to college graduates. All Americans who are qualified will be welcome to join this effort. But undoubtedly the corps will be made up primarily of young people as they complete their formal education.

Because one of the greatest resources of a free society is the strength and diversity of its private organizations and institutions much of the

Peace Corps program will be carried out by these groups, financially assisted by the Federal Government.

Sources of supply

Peace Corps personnel will be made available to developing nations in the following ways:

1. Through private voluntary agencies carrying on international assistance programs.
2. Through overseas programs of colleges and universities.
3. Through assistance programs of international agencies.
4. Through assistance programs of the United States Government.
5. Through new programs which the Peace Corps itself directly administers.

In the majority of cases the Peace Corps will assume the entire responsibility for recruitment, training and the development of overseas projects. In other cases it will make available a pool of trained applicants to private groups who are carrying out the projects approved by the Peace Corps.

In the case of Peace Corps programs conducted through voluntary agencies and universities, these private institutions will have the option of using the national recruitment system—the central pool of trained manpower—or developing recruitment systems of their own.

In all cases men and women recruited as a result of Federal assistance will be members of the Peace Corps and enrolled in the central organization. All private recruitment and training programs will adhere to Peace Corps standards as a condition of Federal assistance.

In all instances the men and women of the Peace Corps will go only to those countries where their services and skills are genuinely needed and desired. United States operations missions, supplemented where necessary by special Peace Corps teams, will consult with leaders in foreign countries in order to determine where Peace Corpsmen are needed, the types of job they can best fill, and the number of people who can be usefully employed. The Peace Corps will not supply personnel for marginal undertakings without a sound economic or social justification. In furnishing assistance through the Peace Corps careful regard will be given to the particular country's developmental priorities.

Membership in the Peace Corps will be open to all Americans, and applications will be available shortly. Where application is made

directly to the Peace Corps—the vast majority of cases—they will be carefully screened to make sure that those who are selected can contribute to Peace Corps programs, and have the personal qualities which will enable them to represent the United States abroad with honor and dignity. In those cases where application is made directly to a private group, the same basic standards will be maintained. Each new recruit will receive a training and orientation period varying from six weeks to six months. This training will include courses in the culture and language of the country to which they are being sent and specialized training designed to increase the work skills of recruits. In some cases training will be conducted by participant agencies and universities in approved training programs. Other training programs will be conducted by the Peace Corps staff. . . .

It is important to remember that this program must, in its early stages, be experimental in nature. This is a new dimension in our overseas program and only the most careful planning and negotiation can insure its success.

The benefits of the Peace Corps will not be limited to the countries in which it serves. Our own young men and women will be enriched by the experience of living and working in foreign lands. They will have acquired new skills and experience which will aid them in their future careers and add to our own country's supply of trained personnel and teachers. They will return better able to assume the responsibilities of American citizenship and with greater understanding of our global responsibilities.

Although this is an American Peace Corps, the problem of world development is not just an American problem. Let us hope that other nations will mobilize the spirit and energies and skill of their people in some form of Peace Corps—making our own effort only one step in a major international effort to increase the welfare of all men and improve understanding among nations.

14-4. The men in the middle

"The crucial role of both the nationals and the Americans is that of mediating between societies. They are men in the middle; they are not just individuals from different societies."

JOHN AND RUTH USEEM AND JOHN DONOGHUE

A heavy responsibility for the success of technical assistance abroad must always rest upon those men and women who elect to work abroad, representing, as the case may be, a university, private foundation, the government, or other agency, and always their country. Projects, no matter how carefully conceived, designed, and financed, must finally depend upon the people who work in them. The overseas American educator works at the intersection of cultures, at which new cultural distillate with its own distinctive features and dimensions is formed. To be effective in his work, he needs an appreciation of his new cultural milieu, its usefulness and its limitations.

In the following selection John and Ruth Useem and John Donoghue write of this mediating role between societies that the American overseas must perform. The success of overseas work depends to a great extent upon how well this mediating role is understood and acted upon. As the authors state: "The third culture, and the community of men whose behavior is organized by it, is like a bridge between societies. A bridge, however, is worthless unless pathways and roads link the bridge with segments of both societies."

[John and Ruth Useem and John Donoghue]

In recent years it has become axiomatic in the administration of American-sponsored cross-cultural programs to point out the necessity of "taking into account" the "first" culture—the Indian culture, or Vietnamese culture or Brazilian culture—and many such programs now have attached to them interpreters of the first culture. It has become equally axiomatic that the administration of American cross-cultural programs must "take into account" the *second*, or American culture. Increasingly, orientation programs attempt to provide Americans with awareness of their own culture and society. With neither of these premises would we disagree. However, we suggest that many weaknesses and strengths of cross-cultural programs hinge on the nature of the "third culture" and that this dimension also needs to be taken into account along with the first and second cultures.

What is the binational third culture?

That segment of the world-encompassing third culture called the *binational third culture* is defined as the complex of patterns learned and shared by communities of men stemming from both a Western and a non-Western society who regularly interact as they relate their societies, or sections thereof, in the physical setting of a non-Western society.

The third culture and the community of men whose behavior is organized by it, is like a bridge between societies. A bridge, however, is worthless unless pathways and roads link the bridge with segments of both societies. Some groups move between societies without actually bridging them—as, for instances, tourists and the leisure-attuned upper classes who freely travel around the world but who do not have mediary functions, peasants and laborers who migrate from their homelands to a foreign country, foreigners who marry nationals. These

1. John and Ruth Useem and John Donoghue, "Men in the Middle of the Third Culture: The Roles of American and Non-Western People in Cross-Cultural Administration," *Human Organization*, vol. 22, no. 3 (Fall 1963), 169-179. (Excerpt.) Reprinted by permission of the authors and the Society for Applied Anthropology.

are not without significance in the diffusion of cultural patterns but they are not part of the binational third culture. Important sociological questions therefore, must be raised: Who uses the bridges over which now passes two-way traffic between America and non-Western societies? Are the bridges adequate for the tasks? Do they aid or impede cross-cultural programs which are funneled through them? Who can close off the traffic and at what points? Where do the outlets and pathways lead into the connected societies? What happens to them when they reach their destinations?

All non-Western societies contain a foreign population out of which develop selective groupings of foreigners and nationals. The middle years of the present century have seen profound changes in the composition, scope, and purposes of the foreign-national groups and their third cultures. In the aftermath of colonialism and the surge toward the modernization of traditional societies, alien governors have been supplanted by envoys and technical assistants; the authority and rank of the foreign administrator—whether in business firms, missions, schools, armed forces or government—have been lessened and the authority and rank of national administrators have been increased. The social ground rules have changed as customs appropriate to super-subordinate colonial relationships give way to new modes of acting in the presence of coordinates.

Apart from the many facets and changes in the patterns of the third culture, two are here germane: out of the West has come a new community of foreigners—the Americans, and these Americans have entered new social groupings of foreigners-nationals. The main bridges to the outside world in a colonial society connected it primarily with the dominant society. Thus British-ruled India and French-ruled Viet Nam had few links with the United States prior to gaining their independence. The Indo-American community and the Vietnamese-American community emerged as distinct entities in less than a decade. Although American missionaries have lived and worked in South Asia for more than a century and some business firms have had American managerial staffs there for half a century, these persons tended to be adjuncts of the dominant European community.

In short both the Americans and the nationals took over fairly unfamiliar social roles and, in fact, created new social roles and a new third culture. The incredible characteristics of the modern binational third cultures is not how few years they have been in existence but

how similar they are from one host society to another, how firm their outlines have become, and how constantly subject to change are the specificities within these outlines.

Themes of the binational third culture

We said earlier that as we move from non-literate cultures to the cultures of nation-states and now to modern third cultures, the themes around which cultures become organized become more explicit and more abstract, with the corollary that the translation of these abstract principles into day-by-day behavior devolves upon individual and group interpretation. Sometimes a particular interpretation is claimed by its adherents as being the only true interpretation of the theme.

There are a number of themes which tie together the patterns of the binational third culture. We shall examine only those of high relevance to the administration of cross-cultural programs, one theme is that the relationships between the members of the two societies and between the structures of the two societies should be coordinate. That they often are not in actual practice in no way detracts from the statement of the ideal, it merely localizes and delineates where conflicts can and do occur and where appraisals and adaptations are made. Endless debates take place around this theme—How is the role of "counterpart" best worked out? Does the style of life of Americans cut them off from or aid in their relationships? How should nationals deport themselves with foreigners? Should the foreigners learn the local language, should the nationals learn the foreigners' language, should both learn both? How does a national relate himself to a foreigner who is technically under him in a national-run organization? How does the foreigner justify his imposition of standards? How much inequality of relationship can be justified as being transitional? To what extent is respect given to traditional ways of doing things in the culture of the other as an expression of equal status?

An additional set of themes are those related to the cross-cultural programs embedded in the third culture. Programs are conceived as being *rational, secular, open-minded, expensive and future-oriented*. At first blush this might seem to be sheer projection of American culture patterns upon the national culture. But what we wish to make plain and what is often overlooked, is that the decision makers and adminis-

trators at the upper levels of non-Western societies are also "modern" in the sense of believing that programs should be rational, secular, open-ended, expansive and future-oriented.

There are wide variations in the interpretation of these agreed-upon themes but, at the risk of oversimplifying the obviously complicated, we should note that cross-cultural programs are taken as rational social instruments which may be legitimately subjected to critical scrutiny as to their effectiveness—by those who sponsor them, by those who are the anticipated benefactors or clients, and by those who are in charge of carrying them out. Rarely do they gain acceptance as a symbolic value in themselves even though the symbolic value comprises an often-unrecognized latent function of the programs. They are expected to show concrete results and, typically, the men and the programs are held accountable for the results even where there is disagreement as to what should be the outcome of an enterprise and even when various groups use different yardsticks.

Cross-cultural programs are open-ended in that they are considered not only capable of further additions and growth but, indeed, should have this dynamic quality. They are expansive and future-oriented in that any program is construed not as the end point but as the beginning, something that is destined to spread out to include wider groups and, ideally, to diffuse through-out a society. The programs are deemed as "experiments," pilots, and models. This mood sets the attitude toward the present as just the "start," the "toe in the door," and ever-fresh starts are legitimized by the likelihood of new "breakthroughs." We are impressed with the readiness of newcomers (whether American or national) to start afresh when given the chance. Although it may make for a high loss, it also makes for a buoyant, optimistic attitude toward the forthcoming. At the outset of programs, the first Americans to come and nationals new to the roles have a "natural" habitat in which to fulfill these norms—but as they become standardized operations, subsequent members feel enveloped by the system and look for new ways to cut through it. Nationals who are committed to these themes may feel hampered by limited resources to commit to such risk-taking enterprises.

As programs are implemented, however, they characteristically exhibit persistent tendencies to turn out differently than planned—sometimes more successful than anyone hoped, oftener, more disappointing than anyone anticipated—and in all instances replete with surprises. One not uncommon response of policymakers to the

apparent shortcomings is to upgrade the program by more vigorous application of the same principles: develop a better organization, introduce more efficient methods, secure a higher quality of personnel, add more technical staff, draw up new and better plans. The foreigners and nationals at work, in despair over the lack of accomplishment, may attribute blame, comsonant with local mythology, to the general character of the people from the other culture or to higher echelons in their own organizations and call for improvements in the selection of men and the development of program support. All of these pre-occupations may actually help advance a program but at a high cost of additional investment with disproportionately small returns on the input and do so without necessarily coping with some of the factors which cause much of the drag.

Restated more positively, a third culture and the community of men who carry it, has the potential for both supporting and obstructing cross-cultural programs but the third culture and the community of men who carry it are more than just the cross-cultural programs within which they are engaged. The binational third culture and the men carrying it cannot be ignored any more than the first culture or the American culture can be ignored.

Men in the middle

The men who carry the binational third cultures are small in number. There are, for example, only about 2,000 Americans working and residing in India, plus 4,000 dependents. In Viet Nam there are approximately 1,000 Americans (with 2,000 dependents) in non-military programs and 5,000 military unaccompanied by dependents. The nationals who are part of the third culture are much more difficult to enumerate but certainly they, too, are numbered in the thousands rather than the millions. One would be overgenerous in his estimation at the present time to say that the totality of members of all binational third cultures represents less than one-tenth of one per cent of the combined populations of the societies they represent. Such a percentage is no true index of their significance for cross-cultural relations. They are tiny yet vital links between the Western and non-Western world.

The crucial role of both the nationals and the Americans is that of mediating between societies. They are *men in the middle*; they are not just *individuals* from different societies relating themselves personally

to each other but *representatives* from different societies relating their societies, or at least segments thereof, to each other by way of their interpersonal relationships, by way of the structures they erect, and by way of the cultural patterns they create, learn and share.

The third culture, like any culture, has to be learned and passed on from generation to generation. In contrast to a traditional culture in which there is a correlation between generation and age and hence we can speak of an older generation and a younger generation, the generations of the third culture are not based on chronological age of the participants but on the time at which participants are socialized to the third culture and the experiences which they have had in the third culture.

At the present juncture in history, it is the rare person who has been socialized from birth onward to be a member of the third culture. Usually members learn the third culture as adults after having been previously socialized as members of their own society. Recognition of the need to learn quickly has led to the establishment of a number of orientation programs, particularly for Americans. These serve important functions in easing the transition of men from one society to another and acquainting them with the broad themes of the third culture; but most learning takes place after the men enter their primary work role of mediators inside a binational third culture.

Furthermore, there is constant turnover in the membership of any particular binational third culture. The average tour of duty for many Americans is two years, some are overseas for only a year and only missionaries, business men and some foundation employees have longer periods. Still others are somewhat permanently overseas but not in the same country.

Nationals involved in cross-cultural programs are also quite mobile, although for reasons somewhat different from those which contribute to the American turnover. Whereas Americans in a foreign country seldom change organizational alignments, many nationals remain in the third culture but are moved from one enterprise to another. A change in the power structure of the host country might also precipitate a whole new set of nationals in the third culture, particularly at the higher levels, just as a change in political administration in the United States or a change in policy of the stateside administrative headquarters brings new personnel abroad.

At the present time there are at least three discernible generations of the third culture:

1. "First-timers": On the American side these are the "first-time-outers." This generation is not only new to the particular host country, but has had no experience in any binational third culture. Persons of this generation are usually rather zealously dedicated to the programmatic aims under which they arrive, are "plungers" into the traditional culture of the host country, are highly enthusiastic about the possibilities of effecting change, are most imbued with the themes of the third culture outlined earlier, and are the most willing to subordinate other personal concerns to programmatic goals and third culture themes.

Whether or not this generation is successful depends upon the organizational environment into which they move, the level at which they move in, and the degree of crystallization of third culture. First-time-outers in brand new organizations and in uncrystallized third cultures often have amazing accomplishments in building programs. First-time-outers who come in at the top of old-line organizations and more crystallized third cultures are somewhat less successful than those above, but are more successful than the first-time-outers in lower-level positions in old-line organizations and more stabilized third cultures. The last mentioned are more apt to become disenchanted by the discrepancies observed between their ideal ends and the realities they encounter. Most move on rather quickly to becoming members of the experienced generation described next but some few withdraw from the third culture (even though they may remain in the host country to the end of their tour of duty), others leave to take up the threads of their lives in their own society but maintain continuing interest in some aspects of the third culture. Some even write "exposes."

This generation has its parallel among nationals. These might be called the "first-time-inners," and they share many of the characteristics of the "first-time-outers" in their enthusiasm for idealized program aims and in their feelings of expansiveness as they take up a new role in life. When new generations of Americans and new generations of nationals work together in the building of new programs, exceptional innovations can occur, but structures and institutions built in this period require a different generation for their maintenance.

2. The "experienced": The second discernible generation of the third culture is the "experienced." On the American side this grouping is composed of those who have come to terms with a more crystallized third culture and with already established organizations. Some make

this change of generations within one tour of duty within a particular binational third culture, others have had their first-time-out experience in another binational culture. The persons composing this generation are less likely to be "plungers," are more cautious in identifying their egos wholeheartedly with some specific program aim, are more wary of becoming encapsulated with either a national or American group which would interfere with carrying out program aims, are committed to the themes of the third culture but feel they can be achieved in a number of alternative ways and with a series of different techniques. They are no less loyal to the overall program but are less committed to a specific interpretation. At any rate, they believe there is less urgency about the whole matter. This generation is less willing to subordinate all of the other personal values they hold to a single programmatic goal (for example, they are less willing to see their children go without education, are less willing to make personal sacrifices in comforts, style of life or recreational pursuits) and at the same time develop new subsidiary values which can be fulfilled in the third culture (they like the style of life, enjoy meeting important people, get satisfaction out of being in the thick of things, find it rewarding to participate in the building of the third culture, and are pleased with the growth and development of their wives and children in this environment).

This generation, too, has its equivalent among the host nationals. Some of them have come into it through the route of being foreign-educated, others through being modern-educated in their own country, still others by having represented their society in some other binational third culture, and some simply through continuing participation in the particular third culture. If these two generations of the third culture are linked, cross-cultural programs have less dramatic successes but also avoid more pronounced failures. As individuals they have no fewer frustrations and problems but they become more sophisticated in routinizing them. Both the Americans and the nationals of this generation are less prone to moralize and blame, more concerned with getting on with the job in light of the realities of the situation. They tacitly invoke what has become world-wide standards in the appraisal of events and ideas; in short, they "talk each other's language" precisely because they have been socialized to the third culture. One of the functions of this generation is the socializing of the "first-timers" whether of their own or other nationality.

3. "*Old Foreign Hands*": The third discernible generation of Americans overseas are those who were socialized to living abroad during

the aegis of the colonial culture. With independence and the rise of coordinate third cultures, that to which they were socialized is gone. Although there is no single mode of change, all of them have had to alter their personal patterns of adjustment. Some have thrown their lot in with the people of the first culture and are no longer a part of the modern third culture. Although they may be sought out by members of the new third culture because of their experience or knowledge of local languages and cultures, they do not have the role of representative in some program in the third culture. Others (missionaries and businessmen particularly) are forced to come to terms with the modern third culture because of changes in their organizations as a result of the overall changes in the relationships of the two societies. Some make this transition with great pain, others more easily, but none is unaware that the modern third culture is different. Some of the old foreign hands may leave the particular national environment for another or for retirement from the area of binational relations.

This old line generation is also found on the national side. Local people who were once subordinated in the colonial culture now find themselves in positions in which they are coordinates with foreigners and, in many instances, the organizational superiors of foreigners. The transition for them may also be fraught with considerable pain—particularly when they find themselves in positions of having to take responsibility for the shortcomings of programs which once could be blamed on the foreign rulers and when they become the targets of blame for the unfulfilled aspirations of the new nationals. Some withdraw or are forced out of the modern third culture and still others find highly satisfying roles within the new look of cross-cultural relations. The old foreign hands and old subordinated as generations may be a passing phenomenon but their places will be taken, and in fact already are, by nationals and Americans who were socialized in an earlier version of the rapidly changing modern third culture.

How these generations are mixed and matched affects how men in the middle perform their roles, relate themselves to each other and administer their programs, and ultimately, the success or failure of the programs. . . .

A functional analysis of third cultures helps to illuminate their consequences for cross-cultural administration.

1. The institutionalizing of norms and structures in a third culture assures continuity in spite of the inevitable turnovers in personnel, organizational tensions, personal stresses and fluctuating policies. It

has survival value. To be sure, apart from any third culture, groups of men may brilliantly achieve striking innovations; but the issue must be raised as to how long they endure without supporting patterns. Cultural monuments can be found all over the non-Western world where widely-acclaimed earlier developments have left no permanent impact because there existed no institutionalized patterns to sustain them.

2. Third cultures provide the patterns which enable the members of different, yet intersecting societies to work together within a framework of mutual expectations, a universe of discourse and some measure of consensus. They allow for a succession of newcomers, who are personal strangers to each other, to move swiftly and develop roles consonant with their purposes for being in the cross-cultural programs. Nationals can relate themselves to foreigners and foreigners to nationals without undergoing prolonged explorations and testings in their roles as counterparts. Each individual does not have to create all of the appropriate patterns of behavior. Knowledge within the third culture, as in any culture, is cumulative.

3. Much of the actual learning and adjusting which facilitates interpersonal communication and meaningful interaction within the world of work takes place in the wider context of group life in the third culture. Few Americans have detailed information or genuine understanding of their forthcoming work role in the host society until they actually enter it. Obviously they know the technical content of their occupation and normally have been screened to assure that those chosen have the required skills for the assigned job. Most also receive a formal orientation or briefing prior to departure. Our research shows that seldom do men find the job, the status, and the bureaucratic systems corresponding to what they had envisioned before departure for the overseas assignment. The groupings of Americans and nationals in which the newcomer may participate, providing he does not cut himself off from them have the capacity to guide his socialization to the organization and connected segments of the society wherein he assumes his work role. Greater cognizance of this function on the part of both the binational communities and the newcomers would aid in the success of cross-cultural programs.

4. For plans which originate in one society to have an appreciable impact on another rests on the assumption of a third culture to implement and accommodate them in the context of the environments where they are finally carried out. We have observed in our times that

when a third culture is absent, numerous bold plans, generously funded and manned by competent staffs have had minimal effects. One of the most impressive social facts is that since World War II, a traditionally provincial nation like the United States has developed the technical, scientific and administrative leadership to initiate rational development plans that have ramifications throughout the non-Western world. We recognize that these accomplishments have depended on the presence in the host countries of a partially established third culture or a readiness to improvise one.

5. We once calculated the rates of culture change in terms of generations. Now we have evolved a cultural complex which is revolutionizing the change process. Diffusion used to be conceived of as being the gradual spreading of technology, skills, practices from one locality to its closest neighbors and so on through a region of the world, e.g., the spread of cordmarked pottery across northern Asia or the dissemination of wet rice techniques from southeast Asia—both of which took centuries. Today men of the third culture have introduced such technical objects as transistor sets, D.D.T., and chemical fertilizers all over the world in a period of less than two decades.

This is not to claim that only a third culture explains these phenomena, for obviously many other forces impinge on cross-cultural programs. Nor do we wish to ignore the malconsequences where the rough and jagged edges of current systems distort the ends they are intended to serve and exact too great a price in the lives of human beings. A third culture can also go against the grain of a program.

1. The patterns of the third culture may offer the illusion of homogeneity which in fact does not prevail. For example, much has been made of late about culture shock on entry into non-Western societies. Our field studies clearly reveal that the shocks with the deepest impact on the newcomer occur not when he acts as a detached spectator who explores a strange land with seemingly bizarre customs but rather after he penetrates into the world of work. Here he sees what look like familiar bureaucratic structures and technological systems but the way they actually function is confusing. He meets people with professional training similar to his own but who do not always act in their work role as expected—yet he depends on them for getting the job done. Frustration becomes part of his everyday language if he finds no way to achieve fuller understandings of why things which look alike do not perform as they are supposed to.

2. Men may be entrapped in situations in which no amount of

personal effort can have productive results. Housing, schools, religious institutions, and adequate medical care are simply not there. Only group action, organizational supports by both the American and national side can bring about even approximate solutions. Few men have the choice of switching organizational affiliations during their stay in a foreign country should they find their assigned role impossible. The tightness of the American community and the binational community may be too constrictive. Groups of Americans may reside within a compound, an apartment house or a neighborhood—and also work in the same organizational structure. The ecological concentration magnifies even trivial acts, causes an acute sense of relative deprivation, transforms marginal items into ones of great symbolic value. Who did not get invited to a conference? a cocktail party? Why was this man assigned better housing for his family when we are of higher rank? What right does the wife of the senior man have to insist that the wives on her husband's staff conform to her tastes and standards of conduct? Small differences in style of life, work habits, and personality can precipitate intense hostilities, with flareups that splash over into the whole group and into the work organization.

3. Latent in and typically beneath the third culture surfaces, exist a "culture-bound" complex of values, habits, loyalties and moral commitments on the part of both foreigners and nationals.¹ The average member of a third culture brings to it a self-and occupational role developed in his own society. Either side becomes anxious if not indignant if the third culture rules under which they have agreed to operate are violated by the other. The probabilities of this occurring are heightened in a transitional non-Western society since its new bureaucratic structures contain an admixture of traditional and modern social practices.² The foreigner does not have the self-involvements in sectors of the host culture which call forth loyalties and obligations of nationals; the later may not be able to disregard kinship ties in allocating scarce opportunities and besides he may feel a greater degree of trust for relatives than for fellow nationals who possess the formal qualifications of a job. Under these conditions, the foreigner may suddenly discover that he has become entrapped in commitments which violate his conception of how the program should be carried

1. See E. T. Hall, *The Silent Language*, Doubleday & Co., New York, 1959.

2. See Fred W. Riggs, "International Relations as a Prismatic System," *World Politics*, XIV, No. 1, October, 1961.

out. Doing violence to the foreigner's mores related to the usages of technology, sciences and organizational efficiency provoke frustration. Nationals react in similar "culture bound" ways to offenses against their traditional mores. In sum, cognitive dissonance fosters alienation; each knows what is taking place but is unable to accept it as legitimate.

4. The pool of knowledge from which both foreigners and national counterparts draw their understandings may be permeated with cultural fictions about other segments of the host country. Programs are fashioned in accord with the climate of opinion in a third culture and may not take into account the actual facts within the population for whom the program is designed. In a non-Western society with a small modern-educated and urban raised administrative class, the sum of their genuine understanding of the provincial subcultures often proves scanty on close study. Immersed in their own value system they underestimate the survival power of ancestral institutions and proceed on the assumption that changes can swiftly take place. The third culture may also contain cultural fictions about American culture—the degree of support a program enjoys, the availability of manpower to do the job, and the time it takes to get programs, equipment and men through the American bureaucracies.

Whether a particular third culture is pervasive or restricted, functional or dysfunctional, from a world view, it exists. It always has. An anthropologist would say that throughout history, the diffusion of man-made artifacts, information, ideas, beliefs and aspirations has taken place between societies via cultural contacts and human interaction. In retrospect, we classify these men and their activities as incipient third culture phenomena. Now man has become one and thousands are engaged in the common human process of sharing mankind's social heritage. In our times, coordinate cross-cultural programs have become man's newest instrument to quicken the pace and organize the means. In fact, the administration of cross-cultural programs in binational third cultures is but an expression and a product of an expanding, world-encompassing third culture.

In a larger sense, what we have said here is just a small part of our common endeavor to understand the nascent cultural patterns which are emerging in an interdependent world.

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chapter 15

American University Contributions to the Developing Nations

15-1. Should we not lift our sights?

"Both from the standpoint of the universities and of the government it seems to me time to make a searching reappraisal."

DAVID E. BELL

As David E. Bell points out in the following selection, the first United States' university contract with the government of a foreign nation for technical assistance was signed in 1953 under the auspices of the Agency for International Development. Since that time the number of university projects sponsored by the U.S. abroad, under both private and government auspices, runs into the hundreds and they have been established in almost every developing country of the free world.

The substantial contributions of these cooperative projects of universities and sponsoring agencies in recruiting specialized and expert talent, in bringing new ideas and approaches to the university and its country are there for all to see.

These projects also have their failures and shortcomings: the piecemeal approaches to big problems, the inability to tap the best of the university resources and to strengthen those resources, and the failure of the

universities to make use of this overseas experience in the teaching, research, and service it performs at home and abroad. Because of these persistent problems, there has been a growing awareness of the need to reappraise the relationship of university and sponsoring agency in order to strengthen the partnership and "lift our sights," as Bell puts it.

He also lists the issues that he regards as crucial in AID-university relationships and, in so doing, he poses the agenda for the Gardner committee charged with the responsibility of taking a fresh look at AID-university undertakings. In the subsequent selection we shall present the Gardner committee's response to Bell's agenda.

It should be noted that although the following two selections specifically deal with university-government relationships, the general principles they delineate are also relevant for university-private agency relationships.

[David E. Bell]

I doubt if there are many persons, even from universities with AID contracts, who realize the full extent of AID's reliance on the university community. The first university contract was signed in 1953. Under that contract, Oklahoma State University committed itself to help develop a modern system of agricultural education in Ethiopia. Since then, the contract system has grown steadily to embrace more programs, more U.S. universities, and more countries.

At present, sixty-nine universities are engaged in technical cooperation efforts abroad in thirty-seven countries. AID has currently committed about \$136 million in support of university contracts. The sheer variety of programs is also impressive. As illustration—Stanford University is helping Peru build a program in business administration; Colorado School of Mines is working with a technical university in Turkey to develop metallurgical engineering; the University of Connecticut is at work in Northern Rhodesia in education and agriculture; Michigan State University is responsible for a regional edu-

David E. Bell, "The University Contribution to the Developing Nations," Address at the Education and World Affairs Conference, Michigan State University, East Lansing, Michigan, October 11, 1963, pp. 1-6. (Mimeographed.)

cation center serving all of Central America; a consortium of nine U.S. universities has undertaken the ambitious task of developing a new technical university in India. The principal fields of activity are: education, agriculture, engineering, business administration, public administration, and medicine—fields which provide the specialized manpower so essential to the developing nations. . . .

In all countries, our objective is the same: the building of modern educational systems which better equip that society to meet its own pressing need for highly-specialized manpower. We are—and this I emphasize very strongly—not primarily engaged in the export of American know-how, but rather in the development of local institutions which have roots in the society they serve, and will help that society to meet its needs now and in the future.

What does the record show? After nearly a decade of growing university involvement, what can fairly be claimed? These are significant achievements:

First, AID and its predecessor agencies have tapped many of the strongest U.S. universities for overseas service. The list includes many of the leading land-grant universities, some of our best state universities, and a creditable number of the private universities. The response of the academic community, in short, has been impressive.

Second, the university contract arrangement has brought to the campuses of the United States new ideas, new perspectives—a true and valuable broadening of the experience of hundreds of faculty members and university administrators.

Third, there is a solid record of tasks accomplished. The Indonesian medical schools are stronger because of our help; modern programs of business and public administration have been successfully planted in some of the Brazilian universities; a new agricultural experiment station exists in Sierre Leone; at Makerere College in Uganda a teacher training program of great potential is taking shape. We could cite a very long list of successes around the world, and nothing I say tonight is intended to obscure that fact.

However, in my judgment, we all should ask ourselves whether we should not lift our sights. Both from the standpoint of the universities and of the government it seems to me time to make a searching reappraisal of what we are in fact doing and what we can and should do better. I believe, for example, that we in AID are very far from tapping the full energies and talents of the colleges and universities. Moreover, we have yet to develop the kinds of arrangements which

strengthen the universities and enable them—and us—to do a better job for the long pull. This is why, earlier this year, we asked Mr. John Gardner of the Carnegie Corporation to head a Task Force on AID-University Relationships. That group is taking a fresh look at AID-university relationships, and we look to Mr. Gardner for recommendations for improvements which will serve the interests both of the universities and of the government.

May I mention here tonight several of the issues that are high on the agenda of the Gardner Committee.

First, what can be done to ensure that the universities involved in AID programs are strengthened in their essential tasks of teaching, research, and service? There is no real assurance now that an AID contract will strengthen the contracting university. Frank Bowles, in a recent address to the American Council on Education, had this to say about the use of universities as a technical resource by government agencies such as AID. "They are not used as universities but are necessarily employed piecemeal—a school of librarianship here, a public administration program there, agriculture somewhere else. In piecemeal operations they rarely command the best administrative talent, or the best teachers from the parent institution. In fact, too often the overseas operation is staffed by men recruited for the purpose, not members of the faculty, very often men who are retired from other institutions, while the regular staff and organization of the university are untouched by the overseas undertaking."

The criticism may be too harsh—I think it is—but Mr. Bowles is dealing with real issues which cannot be ducked. A university which accepts a contract, if it is to do an effective job, must undertake real responsibility, involving a true commitment of the time of its own faculty and its own administration. By the same token, it will not do for the government simply to regard universities simply as contractors who make available specialized talent.

In the long pull, federal programs must be so structured that they add to the capability of the cooperating university. I do not know what methods may be found to meet this need, but there is no question in my mind that we must find such methods if the universities are to play a full and appropriate role in the effort to build free institutions—and free nations—around the world.

Second, how far can we move in the direction of bringing the universities into AID programs at earlier stages and for more ambitious assignments? Plainly AID should not think of its relationships with

universities in terms of defining an assignment and then searching for a suitable contractor. In those areas of AID's activities where a university contract is appropriate, it is plainly desirable to enlist the special talents of the universities at an early stage, that is, in the diagnosis of the problems they are expected to tackle, and the development of programs to meet those problems. Moreover, we may well have been thinking of "projects" in too narrow, and circumscribed, a sense. In some cases at least, it may be that instead of trying to upgrade a part of a university we should seek to modernize the university in its entirety—as indeed I believe MSU is now seeking to do in one instance. The experience of President Hannah and the MSU people in Nigeria may be very revealing on that score.

At the same time, it is clear that in designing and managing programs, AID and its field missions cannot abdicate their basic accountability to the President and the Congress. In accommodating these interests there is abundant room for ingenuity and innovation.

Third, how do the universities and AID cooperatively develop a better method for selecting a university for a given assignment? AID is extremely anxious to pick the right university for the task at hand. This is not an easy matter. Obviously, AID cannot simply put assignments up for competitive bid. Equally obviously this is much too important a matter to be left to chance encounters or haphazard selection processes.

Here we should be able to learn more than we have learned from our own experience and that of the private foundations and of other government agencies. Whatever we do, it is essential that we build on existing institutional capability. Even the strongest universities cannot do everything equally well. How many "centers of excellence" in Latin American Affairs, for example, can the nation justify? One idea that plainly needs exploration is that AID, in concert with other interested federal agencies, might invest in certain institutions so that their capability to undertake assignments for federal agencies would be steadily strengthened.

The small university and the liberal arts college pose a special problem. It will not do to bypass these institutions because no single one is able to staff an overseas operation. A group of universities may be able to do what no one university or college can do by itself. The solution may be to encourage the use of consortia of universities. I realize that the use of consortia raises the spectre of red tape and administrative complications. But surely these problems can be min-

imized. To bypass the smaller institutions strikes me as indefensible.

Fourth, how can we do a better job of profiting from experience, of building the results of past experience into the technical assistance program? We now have a substantial body of experience with university contracts. Yet one has the impression that many problems are being approached as if no one had faced them before. This is not good enough. The task of institution-building is delicate, complex, and hazardous. It involves changing the beliefs and attitudes of others—and changing some of our own in the process! We cannot excuse ourselves if we do not learn from our own successes and failures, and steadily improve our performance in the future.

Here AID and the universities share a responsibility and an opportunity. If a system of evaluation is built into the contract, it ought to be possible not only to evaluate efforts as we go but to learn as we go. I believe this will require significant changes in the way AID approaches the university contract, and in the way many universities think of their responsibilities under the contract.

Lastly, how can we enlarge the pool of competent people with the necessary professional and personal skills for "overseas-manship"—and how can AID, along with other agencies, find better ways to tap that pool, to find the right person for the job, and do it quickly? We have not found enough Americans with the right combination of training and experience to staff all our present commitments. And our present methods of matching men and jobs are inadequate. Hit or miss recruitment will not do.

This is no rhetorical plea for "better people" (I once heard a Kansas farmer say "all this country needs is more rain and better people"). It is in part a suggestion for better training. A decade of hard experience attests to the fact that the overseas American can profit greatly from advance preparation. The good engineering professor in a U.S. university is not necessarily a good engineering professor in an overseas university. The well-prepared and successful dean of a U.S. college of education does not always succeed as an education adviser overseas. Good intentions are not enough. New, and unfamiliar demands are made on the overseas American. He functions, in the jargon of the sociologist, as a "change agent." He no longer simply does a task; his job is to change attitudes, and even behavior—no mean task in any culture, and an especially difficult task in strange surroundings and an unfamiliar culture. Given the large obstacles, it's a miracle that so many overseas Americans do as well as they do!

Our universities can do a great deal in preparing Americans for better performance in overseas assignments. Language and area studies suggest one approach; the intensive three month programs which universities have designed for the Peace Corps suggest another approach. However, short-term orientation programs designed to sensitize the overseas American to the culture in which he will work, and give him a good start at mastery of the language, are not enough. If the United States is to meet its many international commitments in the years ahead, an international dimension must be consciously built into the structure of the university—into the departments of economics and political science, into the professional schools of law, business administration, medicine, education. It can be done; in fact there now exist at a number of universities promising efforts which point the way. . . .

Finally, neither the universities or the U.S. government will make the best use of academic talent until we learn how to simplify the movement of professionals between the federal agencies and the universities. The academic career ladder tends to reward those who do not step off the ladder. And the same is true—perhaps to a lesser extent—of government. Insurance, retirement, and other fringe benefits tie the individual to the system. This is bad for the universities, bad for the U.S. government, and bad for the profession. We need to develop ways to encourage university faculty to move freely in and out of government assignments. Instead of two competing career systems, can we not devise more flexible combined career systems which would enable the government to draw upon academic talent and at the same time encourage the universities to utilize the talents of professionals in government. The obstacles are formidable. But the task needs doing.

You will see that the Gardner Task Force faces a formidable agenda. We expect a great deal from the Gardner Committee; but we do not expect miracles. In a very real sense, the issues which I have outlined here tonight can be viewed as agenda items for the American academic community. Without your help, nothing is possible. With your help, promising new developments are possible.

I am fully persuaded that our universities can participate in overseas assignments in ways which enlarge their horizons and strengthen their resources.

Our universities *can* take on much more ambitious, more basic, assignments.

We can develop better methods of selecting universities for the assignment at hand.

We can do a much better job of profiting from past experience. And finally, we can—because we must—find ways of enlarging the pool of Americans qualified by special preparation for overseas service.

The world is not neatly divided into the “developed nations” and the “less-developed nations.” We are all developing. And we all have much to learn from one another. We in the foreign assistance program say to the developing nations: “If you want the fruits of modern science and technology, develop the skills and talents of your people—this above all else.” Can we do less for ourselves?

15-2. Strengthening the partnership

“The collaboration of AID and the universities is important to both.”

JOHN W. GARDNER

In this selection John W. Gardner and his task force respond to the agenda spelled out by David E. Bell in the previous one. This excerpt is the second chapter, “The AID-University Relationship,” of that landmark report.

The contributions of the Gardner report are many and not least among them are the sharpened definitions of the respective roles of universities and government, their separate and unique contributions to the mutual relationship, and the ways in which these unique strengths can be maximized.

Of particular significance for the universities are the comments of the Gardner report on the necessity of whole rather than peripheral university involvement in university contracts. University contracts are sometimes “university” in name only, involving as they do only a superficial commitment. In such case the university man overseas feels cut off from his own institution, and the effectiveness of his contribution is, accordingly, di-

minished. Similarly, under these circumstances, the chances of the overseas experience becoming an enriching factor in the university program are slim indeed. Comments the report: "The reason universities have sometimes failed to behave responsibly in these matters is due in part to the attitude that overseas activities are something quite separate from the main stream of the university's life and being, something exotic, exceptional, not the warp and woof of the university's concern. . . . If the university treasures its integrity then it has two choices: get out of overseas activity entirely or recognize such activity as an integral part of university life and work."

[John W. Gardner]

The complexity of the university's role

Part of the difficulty in AID-university relations is that the proper role of the university has not been well understood. Some AID officials know little or nothing about the nature of the modern university, and a few of them still harbor a thoroughly anachronistic resentment over the intrusion of "eggheads" into practical affairs. Even those who respect the universities often do not know them well enough to demand and get the best that the universities have to offer.

It is a mistake to suppose that the difficulties arise from an inevitable tension between government and university people. Other government agencies, particularly those concerned with science and technology, have forged an extremely fruitful alliance with the universities.

In extenuation of AID it must be said that the role of the university in overseas technical assistance presents certain unique complexities. That role is imperfectly understood even by the universities themselves. The university engaged in technical assistance overseas must function in terms of at least four sets of considerations:

John W. Gardner, "The AID-University Relationship," *AID and the Universities: A Report to the Administrator of the Agency for International Development* (New York: Education and World Affairs, 1964), pp. 5-13.

1. It must perform in terms of its own tradition and integrity as a U.S. university. As such it has responsibilities that define the ways in which it must function.

2. Overseas it finds itself caught up in the complex business of abetting social change in a society that seeks, and resists, modernization. What it can accomplish, or even attempt, is governed in part by the social and cultural framework of the host country and by the dynamics of social change.

3. It also finds that it is working within the context of this nation's relations with the host country. Though it may strive to keep its activities insulated from official policy, it will always be affected by, and may in turn affect, the tone and character of official relations between the United States and the host country. It resists the notion that it has any immediate involvement in foreign policy, yet it never wholly escapes it.

4. Finally, the university recognizes that it is a member of an emerging world intellectual community—a world with its own traditions, requirements, and aspirations. Most university people hope that the emergence of such a community presages better understanding among nations, and would like to contribute to that outcome.

Each of these considerations places compelling requirements on the university—and since the requirements sometimes conflict, there is an understandable confusion of purpose. It would be presumptuous to suggest that we can point a clear path through this maze, but we can at least clarify some of the issues.

The proper roles of the university

There has been much discussion of which overseas roles are appropriate to a university and which are not. We have emphasized that it must perform within the bounds of its own tradition and integrity. Beyond that it is not easy to lay down a general rule concerning "proper" university activities overseas. Each university must settle that question in terms of its own character. Our universities are so strikingly diverse in tradition, organization, attitudes, and goals that it is impossible to generalize about them. (Indeed, that fact has been one of the major problems in preparing this report.)

It is fair to say, however, that the universities will probably achieve

their most profound and lasting influence in working with their own kinds of institutions abroad—or, to put it more broadly, in working to strengthen institutions for human resource development. In this role everything contributes to their effectiveness. They feel at home, they know their role, and they care deeply about the consequences of what they do.

Virtually everyone in the university world would agree that there are certain short-term political tasks overseas that are incompatible with the university's role. For the university to undertake such tasks is inimical to its long-term effectiveness. With minor exceptions, the university must address itself to the achievement of long-term purposes: educational growth and human resource development, the advancement of knowledge, and the application of knowledge to basic problems.

Nor is the university at its best in piecemeal assignments. Even if its assignment is limited, it should see that assignment in the largest context, i.e., the whole state of educational and human resource development in the host country. That is why the university should be drawn as early as possible into consultation on the planning phase of programs in which it will eventually have a part. Only thus can it see its role in a meaningful way. (This is not to suggest, however, that AID should relinquish its responsibility for the key role in planning and programing.)

Degree of autonomy of the university in the field

There is an unresolved—and perhaps unresolvable—difference of views between AID officials and university people on the degree of autonomy to be enjoyed by the university in the field. University people characteristically argue for a large measure of separation between the university and the AID field mission. They point out the potential value of the university as *nongovernmental* representative abroad. They quote Dean Rusk's penetrating comment on student exchange that if our student exchange programs were closely tied to foreign policy they could not make their full contribution to foreign policy. They emphasize that universities enjoy autonomy at home and should not lose it in the field.

The arguments are persuasive, but so are the responses. AID officials point out that university personnel enjoy autonomy at home in their teaching and research functions but not in their consulting

role. In the latter role the ethical framework is not academic freedom but the delicately balanced obligations of a professional to his client. Furthermore, the argument goes, the university simply cannot, and indeed should not attempt to, escape involvement with the field mission. What the university does is inevitably seen as something that "the Americans are doing." And the university damages its argument, the critics say, by wanting it both ways. It wants complete autonomy, yet it wants to be a full partner when the planning is being done, and a full partner on decisions affecting its own area of activity.

It is not possible to resolve this conflict of views by an explicit and precise formula. The nearest we can come to such a formula is the assertion that universities functioning overseas should enjoy the maximum *reasonable* degree of autonomy. This may appear to invite endless debate over what is "reasonable," but in many overseas situations sensible AID officials and university people have shown that they can agree quite well as to its meaning. Most universities in the field have in fact enjoyed a considerable degree of autonomy. Later when we discuss new forms of organization, we shall emphasize again the importance of university autonomy, not just from day-to-day policy but from the whole pressure of a necessarily action-minded line organization.

Those who wish to debate further the issue of university autonomy in the field should bear in mind several considerations:

1. Everyone agrees that the United States Ambassador *must* have the final say concerning United States supported activities in the host country.
2. Everyone recognizes that in practice the university's autonomy varies with the size of the country. In very large countries the university's impact is modest and its freedom consequently greater. In very small countries where its impact is greater and where it is, willy-nilly, a substantial factor in the American "presence," it necessarily functions under greater constraints.
3. The autonomy a university enjoys depends on the nature of the project. Some tasks that the university undertakes overseas are so innocent of policy implications that the question of autonomy never arises. Other tasks are of a sort that have inevitable repercussions at the policy level.
4. There is evidence to suggest that in the long run the solution is

less likely to come from formal attempts to define the relationship than from (a) a systematic attempt to staff AID field missions with men of high professional caliber, well-equipped by background and training to deal with the universities, and (b) a similar attempt by universities to ensure that senior members of field parties be men of proven judgment and stability as well as professional competence.

Involvement of the whole university

We speak of "university contracts," but the university as a whole has not really been involved in many of the overseas contracts. The university man overseas wants to feel (and act as though) he has the while weight and dignity of his institution behind him, but he is often functioning virtually as an independent operator, and his university has committed itself only superficially. Functioning thus independently, he may or may not behave in a way that conforms with the integrity and responsibility of a great university. If the conception that AID officials have of what a university is and does is somewhat distorted, they are not wholly at fault; the universities themselves have contributed to a blurring of the image.

When a university accepts a contract it should take it seriously, accept full responsibility, and put the whole institution behind the contract. In appraising a potential contractor, AID should estimate not only the strength of its resources but the depth of its commitment as a university. The evidence it should weigh might include the university's performance on past projects, its willingness to make appropriate faculty available, the extent to which it has set itself up administratively to handle overseas contracts, and the moves it is willing to make to integrate overseas and home campus activities.

The reason universities have sometimes failed to behave responsibly in these matters is due in part to the attitude that overseas activities are something quite separate from the main stream of the university's life and being, something exotic, exceptional, not of the warp and woof of the university's concern. Wherever this attitude persists it will continue to generate irresponsibility. If the university treasures its integrity then it has two choices: get out of overseas activity entirely or recognize such activity as *an integral part of university life and work*. University officials negotiating on an overseas contract should be required, by AID and by their faculty colleagues, to set down specific plans for integration of the project into the regular

work of the university. (There are exceptions, of course: some highly specialized contracts do not lend themselves to such treatment.)

In universities where the professional schools are large, strong, and relatively autonomous, one can justify somewhat less involvement of the university as a whole. Integration of contract work and university program will take place chiefly within the school. But even here lack of communication within the university may diminish the effectiveness of the program in unfortunate—and unnecessary—ways. Universities that have provided for institution-wide coordination of their international programs have found clear benefits in doing so. The university need not be as severely fragmented as it often allows itself to be.

If the university is to function abroad as it does at home, then it will include research as a normal part of its contract activity. And wherever possible both research and consulting work will be linked to various forms of teaching. For example, professors going overseas will take graduate students with them, not only to work on the contract but to advance their graduate work through research and field experience. At the same time that the university commits itself for a major contract effort, it will undertake to build its library resources in the geographical area covered by the contract and in the development field generally. It will strengthen its curriculum in the same directions and will use faculty returning from overseas to create new and more relevant courses or to revise old courses. It will augment its faculty in the appropriate fields.

In short, in its overseas activities as well as at home, the university will function as a university and not merely as a pool of technical talent or an employment broker. It will remember that its unique role is not to apply present knowledge but to *advance the state of knowledge*, not only to supply experts today but to *train the next generation of experts*.

All such requirements point again to the inescapably long-range nature of university participation in this field.

Though funds to do some of these things may be obtained from other sources, it is only reasonable that AID contribute its share. It is very much in AID's interest that the university undertake such commitments.

If overseas projects do become an integral part of university life, assignments abroad will be much more attractive to faculty members.

The individual going overseas will then be doing work as close to the university's central purpose as the one who stays home.

The university as a resource

To the extent that the universities are a national resource, AID shares with all of government a responsibility not to weaken that resource. If it draws heavily on the universities (as it has in recent years), it must build strength back into the resource for future use. The Bell Report put it this way: "Government agencies share responsibility for seeing that research and development financed at universities does not weaken these institutions or distort their functions which are so vital to the national interest."¹

The main purpose in AID's acting to strengthen the universities is not only to serve the national interest broadly conceived, but to enable these institutions to serve AID itself more effectively, now and in the future. In both the short and long run, AID itself will benefit if the universities gain in their total capacity to deal with the international dimension of their interests.

Some AID officials hold the view that the need to strengthen the university as a resource is necessarily in competition with the need to assist foreign countries directly. But it is not a question of "helping the foreign country versus helping the U.S. university." In these matters the U.S. university is the *means* of helping the foreign country. So the question is: should we spend all the money in an attempt to solve today's problem (which at best can be only partially solved) or spend part of the money improving our capacity to solve tomorrow's problem?

If the medical profession had insisted that every dollar spent in strengthening modern medical education, technology, and science was a dollar unjustly diverted from the care of patients, we would still be treating fevers with leeches. The universities have been in the technical assistance business for some time now, and they would be doing far better today if we had begun ten years ago to strengthen them systematically to do the job that needs doing. A number of

1. Senate Document No. 94 (87th Congress, Second Session), Report to the President on Government Contracting for Research and Development, May 17, 1962, p. 17.

government agencies concerned with other areas of endeavor have found that such strengthening of the universities pays big dividends.

Of course it is the responsibility of the university, not of AID, to take the initiative in strengthening its international capabilities. The university needs help from AID, but it can also turn to other sources of support for such strengthening.

What must the university do to strengthen its international capability? First of all it must, as we have said, recognize the task as one involving the whole institution. It will want to develop the international aspects of the curriculum in many departments and schools of the university. It will encourage research on a whole range of problems relevant to development and to international affairs generally. It will develop its language departments and its library holdings in relevant fields.

Universities undertaking a variety of overseas activities will need to make one or another kind of administrative provision for these activities. And universities being what they are, no two of them will accomplish this in the same way. But however they go at it, some kind of central administrative concern for these activities is essential. Fiscal procedures must be appropriate to the handling of government funds. Personnel practices can do much to facilitate, or impede, overseas assignments: university-wide personnel regulations should be such as to encourage, not penalize, overseas service. In short, if overseas projects are to be successful they require the solid backing of the administration.

Almost every qualified expert who has examined these problems has recommended that the university take an additional step, namely to increase its staff in certain departments so that it can take on overseas assignments without damage to its home-base functions. We heartily endorse this recommendation, but emphasize that it can only be done if all concerned face up to the serious implications. If the university adds to its tenure faculty, it makes an unequivocal commitment to the individuals involved. Someone has to put hard cash back of that commitment.

At some universities a special dean of international programs has been appointed. This officer can be an extremely effective force for the strengthening of the university's international dimension.

But all such discussion of central administrative measures must end with the reminder that in universities power resides in the departments and schools. Enthusiasm and commitment at this level is es-

sential to successful development of the university's international capability.

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The Role of the University in Promoting Change. Ithaca, N. Y.: Cornell University, 1962.

Eight addresses given at the Twelfth Annual Meeting of the Cornell University Council on such subjects as health, agriculture, and technology in relation to the universities' efforts to promote change.

The University and World Affairs, Report of the Committee on the University and World Affairs. New York: The Ford Foundation, 1961.

A long-term view of the role of American universities in world affairs and practical proposals to meet the challenge presented by a shrinking and rapidly changing world.

part eight

THE NEW DIMENSIONS OF PROGRESS

If education is to work effectively toward development, it needs relevant research. Without the empirical data that research can provide, we lack the necessary information for establishing priorities, formulating policies, and designing or evaluating programs. Yet, a genuine research orientation and the empirical data it could provide are almost invariably lacking in developing nations. Most experimental ventures launched thus far have consequently been based on "hunches." Although no amount of research can rule out all uncertainty or eliminate the need to make judgments in the face of uncertainty, sound research can lead to informed judgments that will increasingly contribute to constructive educational planning.

Actually the lack of empirical data, and the research organization and orientation that provide it, is part of the problem of underdevelopment by definition; the establishing of policies and programs on the basis of objective and relevant data rather than upon traditional patterns or personal whims is a characteristic

of that modernity still being sought in the developing nations. The lack of available data for decision making has been the result of a corresponding lack of research organization within the crucial institutions in education. Ministries of education have been inadequately staffed, organized, or financed to gather or evaluate sufficient data. Where institutes of education have existed in local universities or pedagogical centers been set up within ministries, the research they undertake usually reflects a limited conception of the role of education in social change or development. Most often such research is devoted to the study of classroom psychology and teaching methods or testing in the various school subjects. Conspicuously sparse has been research on the social and economic consequences and ramifications of education—conclusions in these fields being left to speculation or off-hand judgment. Even where related research has been carried on within the few institutes for social and economic research, its focus on education has been only intermittent and its translation into educational programs hampered by these same attitudinal limitations of educators.

Consequently, now that education has come to be generally recognized as an indispensable tool in promoting development, there is a dearth of information with which to analyze problems or plan programs. The repertory of pressing research needs is both obvious and staggering. In a sense the chapter headings of this volume might almost serve to catalogue them. The research priorities for development have, however, been subject to more specific and detailed analyses that studied research needs as they relate to education. Soon after the International Institute for Educational Planning was established in Paris, it determined that promoting relevant educational research must be one of its most urgent tasks and organized an international conference to explore the research problem. At other levels, the creation of the research program within the Agency for International Development reflected recognition of the need for more research on and within developmental projects. Increasingly there has been provision for research and evaluation components within government and foundation supported projects. The rich fruits that such built-in research can yield are shown by Holmberg's brief report, which appears in this part, on the Vicos, Peru, project.

Although the types of research traditionally carried on within education will still be desirable in emerging nations, they will lose much of their significance unless accompanied by more comprehensive and, in these times even more urgent, forms of research. Prominent in such a revised research program would undoubtedly be studies of the following kinds.

Studies of the social, psychological, and economic effects of various types of education. Among such studies should be comparative studies of the educated, the uneducated, and those at various stages in the process of becoming educated.

Studies of educational change projects and programs. Such studies of educational "experiments" should not only assess their consequences but also explore the causes of their successes and failures.

Studies of persistent educational phenomena in developing nations. Such studies should include analyses, for example, of the causes for school dropouts, for over-reliance on verbal knowledge, for emphasis upon tradition rather than innovation, for unrealistic educational and occupational choice patterns.

Studies of broad educational strategies in various cultures. Such studies should include the relationship of strategies to cultural barriers and resistances, to differing resource and institutional bases, to differing population divisions and pressures.

Studies of the process of cross-cultural diffusion of educational experience. Such studies should attempt to identify not only factors in the donor and recipient cultures that are relevant to successful adaptation or adoption of educational institutions, techniques or ideologies, but also the general factors in the process of diffusion that affect the success of that process in these cultures.

Finally, of course, we must stress that no amount of sound research can guarantee its effective use. The educational experience of both developed and developing nations provides us with no assurance that research will in fact be translated into better plans, policies, or programs. The prevalence of the gulf between research and action predicated upon its findings suggests the urgency of discovering administrative patterns that at least encourage or facilitate the use of research findings. An example of imaginative administrative design may be seen in the Ministry of Education in the United Arab Republic, in which

the professional side of the Ministry is divided into two coordinate and cooperating Undersecretariates—one for planning and one for evaluation and follow up. Served by the research and training facilities of an Institute of National Planning, such an organization illustrates one way of focusing on research and planning. If we are to implement our belief that research has much to contribute to development, we must not only give our attention to undertaking and carrying on research, but we must also recognize the need for imagination in shaping administration to make use of it.

chapter 16

Research to Enhance Development

16-1. Researcher of a Peruvian hacienda*

"I remain convinced that the interventionist or action approach to the dynamics of culture, applied with proper restraint, may in the long run provide considerable pay-off in terms both of more rational policy and better science."

ALLAN R. HOLMBERG

Among the richest lodes that might be mined by sound research are developmental projects themselves. In all such projects, however, development is the end in view, and programs, means to that end, are appropriately modifiable and modified as the initial hypotheses on which they are based prove inadequate. Hopefully, all educational development projects should be of this flexible nature. In such a situation, it may be asked, to what extent is a participant or interventionist approach to social change amenable to the exacting standards of scientific research? In the article that follows Allan Holmberg illustrates with the highly successful Vicos project how a developmental experiment with a central educational component can be simultaneously an instrumentality for change and a sound research project. Arguing that the need for corrective feedback, which natural science finds in technology and engineering, is

* A large, cultivated farm served by the indentured labor living on it.

likewise necessary for rapid advance in the behavioral sciences, Holmberg emphasizes here that projects designed with the dual ends of research and development in view can be exploited for the reciprocal benefit of science and social policy.

Rich as this conclusion is for education and educators, there is at least one other way in which this article makes an unusually appropriate contribution to this volume, which began its analysis of education and development by asking in Part Two: By whom and for what is education for development to be planned? The faith in a philosophy of democratic participation which was enunciated in the second part and reaffirmed in the discussion on the ethics of planning (in Part Six), is expressed again by Holmberg when he writes of the Vicos approach: "In short, we used our power to share power to a point where we no longer hold power, which is just as matters should be." In fine, here is effective evidence not only for the hypotheses the Cornell group set out to test but also for the faith that a consistent concern about the nature of the good society as well as the means of achieving it does not vitiate research; rather it sets a framework for it, a framework in which science and ethics go hand in hand. This, too, is just as matters should be.

[Allan R. Holmberg]

I

What I have to say on the question of values in action stems largely from a rather deep and personal involvement with this question for the past five years. In 1952, quite by design, although unexpectedly and suddenly, I found myself in the delicate position of having assumed the role of *patrón* (in the name of Cornell Univer-

Allan R. Holmberg, "The Research and Development Approach to the Study of Change," *Human Organization*, vol. 17, no. 1 (1958), pp. 12-16. Reprinted with permission of The Society for Applied Anthropology of Cornell University, publisher of *Human Organization*.

sity) of a Peruvian *hacienda*, called Vicos, for a period of five years, for the purpose of conducting a research and development program on the modernization process.

As you can readily imagine, such action on my part clearly shook (or perhaps I should say shocked) the Board of Trustees—to say nothing of the some 2,000 residents of the *hacienda* and no few of my anthropological colleagues—to the extent, I might add, that had events subsequently taken other turns than they eventually did, I would probably not be writing this and would be much more in disgrace as an anthropologist and human being than I presently am. Moreover, had I known then what I now know, I am not so sure that I would be willing to repeat the experience, even though it has been one of the most rewarding ones of my whole professional career. My doubts lie not so much with the fruitfulness or legitimacy of the research and development, as contrasted with the strictly research, approach to the study of the social process but more with the wear and tear that it might cause to the inadequately financed or inadequately staffed anthropologist or other behavioral scientist who is brash enough to attempt to apply it, especially in a foreign area. On this point I shall have more to say later. For the moment, suffice it to say that having recently retired—again quite by design—from playing the dual role of God and anthropologist (the status of Vicos has recently changed from a dependent to an independent community) and having again assumed the role of a plain anthropologist, I find the change in status a highly comforting one. Nevertheless, on the basis of the past five years of experience at Vicos, I remain convinced that the interventionist or action approach to the dynamics of culture, applied with proper restraint, may in the long run provide considerable payoff in terms both of more rational policy and better science. My concern here, therefore, will be with some of the reasons why I believe this to be the case. What, then, are some of the implications—the advantages and disadvantages, the gains and losses—of the application of the research and development approach to the study of change, both from a value and scientific point of view?

II

On the question of values—in the ethical sense—I really have little to say, more than to state my stand. No one—professional or

layman—can scientifically justify intervention into the lives of other people, whether they be of his own kind or of a different breed. However, by its very nature, the social process is an influencing process among individuals and social groups, one upon which the very existence of society depends. It is no less a necessary condition for the study of social life. Even the most “pure” anthropologist imaginable, conducting his research with “complete” detachment and objectivity, cannot avoid influencing his subjects of study or in turn of being influenced by them. In some instances, I believe, this has led to very salutary effects, both on anthropologists and their informants. Certainly the science of anthropology has been greatly enriched by those informants who were influenced by anthropologists to become anthropologists, even though it may be more questionable, perhaps, that native cultures have been correspondingly enriched by those anthropologists who were influenced by their informants to go native. While this may seem beside the point, I simply want to emphasize the fact that influence and consequently the values which motivate that influence are always part of the process of human interaction and while they can be studied by science, their validation must rest on other grounds.

This does not mean that any anthropologist—pure or applied—can manipulate his subjects without restraint. Some code of ethics must govern his behavior, as the Society for Applied Anthropology long ago recognized. In the case of Vicos, however, where power was held by us, this became an especially delicate issue because having assumed the role of *patrones* we expected and were expected to intervene in the lives of the people. It was at this point that the question of values entered and it was at this point that it was very necessary to take a value stand. What then was this stand?

I long ago made the decision for myself, which is shared by a great many people and communities of the world, that the best kind of a community in which to live is one that is, to quote Aldous Huxley, “just, peaceable, morally and intellectually progressive” and made up of “responsible men and women.” To my way of thinking, and I am by no means unique in this view, the best way of approaching this Utopian state of affairs is to pursue as a goal the realization of basic human dignity to which every individual is entitled. And by basic human dignity I mean a very simple thing: a wide rather than a narrow sharing of what I regard as positive human values, some expres-

sion of which, as Professor Harold Lasswell¹ has so clearly shown, is found in every society and towards a wider sharing of which, if I interpret Professor Robert Redfield² correctly, the broader course of civilization itself has been moving for a considerable period of time.

For lack of better terms of my own to express the meaning I wish to convey, let me again refer to Lasswell who speaks of the following categories of value: power, wealth, enlightenment, respect, well being, skill, affection, and rectitude. The wide sharing of such values among members of the Vicos community was essentially the overall basic value position and policy goal to which we subscribed. In other words, everyone, if he so desired, should at least have the right and the opportunity, if not the responsibility, to participate in the decision-making process in the community, to enjoy a fair share of its wealth, to pursue a desire for knowledge, to be esteemed by his fellowmen, to develop talents to the best of his ability, to be relatively free from physical and mental disease, to enjoy the affection of others, and to command respect for his private life. While no such value stand, of course, can ever be validated by science we and a surprising number of Vicosinos, as I have said elsewhere, and, as revealed by a baseline study, believed them "to be good and desirable ends."³

Movement towards such goals, of course, rests on a couple of fundamental assumptions (or better, expectations) in which I happen to have a very strong faith: 1) that human traits are such that progress can be made towards the realization of human dignity, and 2) that the natural order (physical nature) is such that with greater knowledge and skill, human beings can turn it progressively to the service of social goals.⁴

In stating this overall value position, I have not meant to suggest that movement towards these goals can occur only through a single set of institutional practices. Like most anthropologists I subscribe to the doctrine of the relativity of culture and I firmly believe that people have the right of self-determination, as long as they respect that

1. See, for example, Harold Lasswell, "Law, Science and Policy Papers." Mimeo-graphed, Yale University, New Haven.

2. Robert Redfield, *The Primitive World and Its Transformations*, Cornell University Press, Ithaca, N. Y., 1953.

3. See, Allan R. Holmberg, "Participant Intervention in the Field," *Human Organization*, 14:1 (Spring, 1955), 23-26.

4. These statements were originally formulated by a work group at the Center for Advanced Study in the Behavioral Sciences. Members of this group were John Kennedy, Harold Lasswell, Charles Lindblom, and myself.

right in others. From the very beginning at Vicos we recognized this principle. In short, we used our power to share power to a point where we no longer hold power, which is just as matters should be.

Before leaving these value and policy matters let me simply cite a few of the developmental changes that have come about as a result of the application of the research and development approach to change at Vicos:

1) ORGANIZATION.

1952. Vicos had an *hacienda-type* organization. Outside renters not only had free use of *hacienda peones* for labor and personal services, but also of their animals and tools. Power was concentrated in the hands of *patrón*.

1957. *Hacienda* system and free services have been abolished; new system of community organization now in march is based on shared interests and local control.

2) LAND OWNERSHIP.

1952. No title to land, although Vicosinos had tried on numerous occasions to purchase the land on which they had been living as *peones* for 400 years.

1957. Based on reports of development by the Cornell-Peru Project, the Institute of Indigenous Affairs asked the Peruvian Government to expropriate Vicos in favor of its indigenous population. This expropriation has now taken place.

3) LOCAL AUTHORITY.

1952. Under the *hacienda-type* organization there were no responsible secular authorities within the community.

1957. The Vicosinos have organized a board of their own delegates elected from each of 6 zones of the *hacienda*. They have the legal responsibility for the direction of community affairs.

4) INCOME.

1952. The indigenous community of Vicos had no source of income of its own.

1957. Former *hacienda* lands are now farmed for the public good, providing a steady income for the payment of lands and the development of public service.

5) EDUCATION.

1952. In the aspect of education Vicos had a very small school, with one teacher, 10-15 students.

1957. Vicos now possesses the most modern school in the whole region, recently made a *nucleo escolar*, with a capacity of 400 students. There are now 9 teachers and about 200 students, many of whom have had five years of continuity in school.

6) PRODUCTION.

1952. Low economic production—each hectare of potato land produced a value of only \$100.

1957. Each hectare of potato land is now producing a value of \$400-\$600.

7) HEALTH FACILITIES.

1952. There were no modern health facilities.

1957. A modern health center has been built by the Vicosinos and a neighboring community; a clinic is held twice a week and a public health program is underway.

Most of the cost of these developments have been borne by members of the community themselves. . . .

III

Now what of the scientific implications of the research and development approach to the study of change?⁵ Here again I take a positive view, particularly in a situation like Vicos, where it was possible to work in a complete cultural context, where it was possible to specify social goals for almost all aspects of culture, and where it was possible for the anthropologist to maintain some control over the interventions and variables involved. In such an environment, hypotheses can be tested by comparing actual goal achievement with predicted goal achievement.

Actually in the natural sciences, research and development are inseparable. It is even common to join them in one formal project as is the

5. Much of the material here has been revised from an unpublished document prepared by Harold Lasswell, Charles Lindblom, John Kennedy, and myself, entitled "Experimental Research in the Behavioral Sciences and Regional Development." In a sense they should be regarded as joint authors of this section.

case in many technologically advanced industries, in government, and in private institutions. But whether formally joined or not, scientific discovery is sooner or later inevitably put to the test of success or failure through the application of research results in engineering and technology. In other words, a great strength of, if not a necessary condition for, natural science is feedback through development.

Anthropology, like other behavioral sciences, profits little from such corrective feedback. In part this is because it is not systematically employed in social decision-making, as let us say, physics is employed in missile or building construction. But even if it is employed the results are either not fed back to the anthropologist or they are fed back too slowly to facilitate rapid scientific advance. Moreover, research and development work in behavioral science are seldom joined, even though they were to some extent in Vicos, for the systematic exploitation of their reciprocal benefits, as they are in the research and development laboratories of the natural sciences. To get the feedback necessary for rapid advance in a behavioral science like anthropology, policy is needed, even if policy does not need science.

The connection between research and development in anthropology and other behavioral sciences is probably even closer than it is in the natural sciences. In science, as everyone knows, every generalization is both an insight and a prediction, even though its explicit statement is usually cast in one form or another. Now when a generalization on behavior is communicated to people who are also its subjects, it may alter the knowledge and preferences of these people and also their behavior. Thus a scientific generalization on behavior, by altering behavior, appears to falsify or obsolesce itself. . . .

In general this complication has been viewed as a cross that the behavioral scientist must bear. Actually, a generalization about behaviour is not falsified when predictions based upon it are made obsolete when the subject to whom it is made known prefers to modify himself rather than to conform to an earlier prediction. It is simply that the possibility of modification of behavior must be taken into account and turned to scientific advantage. In the continuous interplay between scientific generalization and goal-seeking behavior, the insight-feedback of a scientific generalization can be employed both for goal revision and as empirical data for research. This is one of the great advantages of the research and development approach. Perhaps an example will illustrate what I mean.

One of the developmental goals of the Vicos program was to bring

decision-making bodies of the community up to a level of competence at which we, the *patrones*, could be dispensed with but without the community's falling victim to its most predatory members as has sometimes been the case. Thus, arrangements had to be made for group survival and stability and, through controlling the complexity of the problems dealt with and by other devices, the groups gradually brought to their highest level of competence. This required that hypotheses be formulated and acted upon—hypotheses concerning the requirements of viability and competence of groups. Once acted upon the hypotheses were tested by their results. Hence each successive developmental step was a step in the isolation of another variable for research.

Concretely, both development and research interests merge in following the consequences of such successive steps as the following, at least some of which were taken for one group of potential decision-makers at Vicos: 1) the group was asked for advice in the settlement of land disputes; 2) it was invested with prestige by calling public attention to its role; 3) the group was given the opportunity to settle land disputes; 4) the group was provided, through skilled observers, the feedback of an understandable analysis of its performance; 5) the *patrón* was withdrawn from the group meeting, reserving only the right to veto under certain conditions; 6) the jurisdiction of the group was enlarged with gradually decreasing veto.

While this detail is much abbreviated, it suggests how research on the developmental steps provides an opportunity for the dogged pursuit of whatever variables one wishes to isolate. Every insight into the variables can be put to a test; and, where predictions are disappointed, a reformulation of the hypothesis can be followed by a further test until predictions are no longer disappointed. By no means will all the unknowns of human behavior become unveiled, but development requires correct insights, hypotheses, and analytic models. It compels their never-ending revision until they pass the test of application.

The essence of the connection between research and development in this illustration is that each developmental intervention—say, introducing legal principles by which land disputes might be resolved—is both a necessary step towards reaching community goals and in the research sense a method of varying the group situation to isolate another variable in group dynamics—in this instance isolating the effect of introducing formal principles against which individual cases

are to be judged. It is precisely because of feedback to the researcher from the development application that research needs development just as much as development needs research.

Whatever the particular example, the story is much the same. The researcher is compelled to follow through, to keep on trying for the refinement of an hypothesis or model that will stand the test of application. If, for example, he wants to know what is necessary to break down prejudice between Indians and Mestizos, his research is not terminated when he has tested one popular hypothesis and found it invalid, because his developmental objectives require that he try a whole series of interventions until prejudice begins to decline.

In the case of Vicos, attempts were made in collaboration with several colleagues⁶ to lay out about 130 specific possible lines of research and development, each matched to a specific developmental goal such as the diversification of agriculture, the development of community leadership, the reduction of social distance between Indians and Mestizos, the increase of educational opportunities for both children and adults, etc. Wherever possible an attempt was made to make fairly precise statements about the goals in question. To lay out the various possibilities in order subsequently to develop a strategy of research and development, each line of possible intervention was represented in a semi-diagrammatic way by a column on a very large bulletin or map board taking up the walls of a room. 3" x 5" cards were used to lay out visually the research and development sequences, subject to constant revision as research and development continues.

At the top of the column is posted for some end-point date the particular goal in question to be reached. At the bottom of the column are posted the counterpart institutional and ideological situations found at the base line period before interventions. Above them are summarized any interventions so far made, and above them the present institutional and ideological situation with respect to this one line of development. The remainder of the column is given over to a proposed schedule of probes, pretests, interventions, and appraisals.

By utilizing such a method, interventions are not likely to be hit or miss and their developmental and research gains can be fully appreciated. Scheduling them requires the careful appraisal of the facts describing the existing situation and trends, probes of readiness of

6. See footnote 5.

the community to take the proposed step, pretests of interventions on a small scale, then the intervention itself and subsequent appraisal, which in turn becomes the first step in a still further intervention. Hence in diagrammatic terms, the upper part of the column, including the goals themselves, is constantly undergoing revision on the basis of the growing lower part of the column representing past experience.

To illustrate the distinctiveness of research, where the whole life of the community is available for study, as it was to a considerable extent in Vicos, it may be helpful to visualize a great many columns such as have just been described, set side by side. The interrelationships among these columns can hardly go unnoticed, and it becomes both possible and necessary to consider these interrelationships in devising a research and development strategy.

One more thing should be said about this contextual mapping in a research and development approach to change. It makes possible, for *development*, an economy of intervention. For example, one way in which to reduce social inequality between Mestizos and Indians is to schedule public functions in Vicos attractive enough to draw neighboring Mestizos in and then conduct these functions in such a way as to break down the traditional acceptance of segregation. One can conceive of an experiment along this line that might test the hypothesis that prejudice between Indians and Mestizos will be reduced by contact under conditions of social equality.

Now with reference to quite a different goal of reducing communal binges, movies are an effective competitor with alcohol because the Vicosinos prefer to be sober when watching a movie. Movies are also an obvious method for adult education, including literacy. Finally, the importation and showing of films may become the nucleus of a small-scale experiment in Indian entrepreneurship. Hence a variety of lines of desirable research and development converge on a movie program for Vicos. Actually such an experiment is now underway at Vicos and a skillful plan for introducing movies into the community may turn out to be a strategically sound intervention because many birds may be killed with one small stone.

I have now said enough to indicate what I believe some of the value and scientific implications of the research and development approach to the study of change to be. Most of what I have said is positive and I have not suggested that this approach be applied to the exclusion of others. My greatest doubts about it, on the basis of my experience at Vicos, stem from the unlikelihood of mobilizing sufficient funds

and personnel to do a research and development job well. It is a man's job that a boy cannot be sent to do. I hope that the powers supporting research will soon take cognizance of this fact.

16-2. Priorities in research

"An important and unique contribution of educational planning is to guide, ahead of time, the demand for education towards tomorrow's realities. The problem for research is how can this be done in practice?"

GUY BENVENISTE

In 1964 scientists from thirty Afro-Asian countries convened in New Delhi to participate in a symposium on the role of science in national development. Inaugurating the symposium, President Radhakrishnan of India called science "an endless pursuit and a great adventure," and added that equally as important as the accumulation of scientific knowledge is the acquisition of a scientific outlook, temper, and approach.

The words of the President of India should have special meaning for all who endeavor to enlist the services of education in the cause of development. Education itself must push back the walls of ignorance and tradition and, in so doing, become "an endless pursuit and a great adventure." It must help to stimulate in all who are touched by it a spirit of inquiry and a restless search for new approaches to human problems. Certainly modernity is characterized by people who have both faith and competence in systematic study and investigation as a basis for progress.

Despite this, development policies are frequently established and development institutions frequently created without either the empirical basis from research that promises a likelihood of success or the strong research component that would begin to provide such a

foundation for subsequent policies and projects. The new dimensions of progress require that research generate knowledge to guide educational policy and replace, in so far as possible, guesswork in critical educational decisions. There is need for specific, scientifically verified knowledge.

For this reason we turn in the final selection of this chapter to an agenda for research. The list of research priorities presented here by Guy Benveniste of the International Institute for Educational Planning may not sound, by its practical nature or by the implicit requirement of hard work, like the great adventure of which President Radhakrishnan spoke. Nevertheless these requirements constitute the solid foundation of an agenda for research that can help to make education a better instrument for development and perhaps even a "great adventure."

[Guy Benveniste]

A. Getting the planning process under way

What basic reports could be of practical use to would-be planners in countries where educational planning has not yet been started? First of all there is a need for basic manuals, some of which already exist and others of which are in preparation. Manuals describing what educational planning is all about and what are some of the well known techniques and methodologies that can already be used for this purpose.

But in addition to these manuals two studies are suggested: The first would be a study of the preconditions necessary for planning; the second would be a study of the experience of a selected number of countries that have recently started to plan.

Guy Benveniste, "Major Research Needs in Educational Planning," International Institute for Educational Planning, Second Seminar at Bellagio, Italy, July 8-18, 1964, pp. 6-30, 32-33. (Mimeographed.) "This chapter was originally prepared as a working paper which served as a basis for the discussions at the seminar organized by the International Institute for Educational Planning. A final report taking into account the other papers presented and the discussions during the course of the seminar is being published by the Institute in Paris."

1. THE PRECONDITIONS FOR EDUCATIONAL PLANNING

This report would first review the possible scope of educational plans, the type of planning institutions needed, and the type of people needed as planners. This part of the report should be relatively short, fifty pages at most, and should not attempt to be exhaustive. But it should first present an easy-to-read overview of what educational planning is all about, what different forms it can take and how it evolves in time.

On the basis of this information the report would go on to analyse what are the minimum environmental, institutional, technical and other conditions necessary before a country can really start to plan. The report should review the type of decisions that must be taken by governments before planning can be initiated. How can the concepts of planning be explained and made generally understood? What type of problems must be tackled in planning? And what type of planning institutions are necessary for this purpose? How can these institutions be linked with all the forces in the society that can contribute to the planning process?

This report would provide would-be planners with an analysis of the necessary prerequisites for effective planning: a practical guide of the complexities of the tasks to be undertaken.

2. HOW TO START TO PLAN:

A STUDY OF THE EXPERIENCE OF SELECTED COUNTRIES

A study of the initiation of the process of educational planning in selected countries should examine the nature of the practical problems encountered and the various initial approaches adopted. What institutional arrangements were created at first? What pre-planning activities were initiated, how comprehensive were the first education plans? To what extent were they prepared in harmony with economic and social objectives? How have the scope and concepts of educational planning evolved? What seem to be the natural stages of development of the process of planning?

Such a study should compare half a dozen or more different initial planning experiences to determine what minimum environmental, institutional, and technical level of preparation was needed before planning could actually get under way in these countries. How did governments and external aid agencies make the necessary "pre-planning investment" to insure that the planning process got under

way? Who undertook the initial work? Commissions appointed by the Government? Universities and research institutions? Existing administrative services? Foreign experts? What are the lessons to be learned by others from the experience of these countries?

This second study would take longer to complete than the first but it would complement it.

B. Methodologies for setting educational targets

The methodologies developed to date are weak in many respects. Most have been developed in industrialized countries and further work needs to be done to adapt them to the needs of developing countries. This is particularly true of manpower projections. Other methodologies such as those needed for making projections of the demand for education are just beginning to be used and still require further work. Much more work is also needed on methodologies to translate needs into educational and training requirements that make sense in developing countries.

1. MANPOWER STUDIES IN DEVELOPING COUNTRIES

Three research areas should receive priority attention. First the development of comparative international data on high and medium manpower needs in the modern sector of developing countries, second high and medium manpower needs for the development of the traditional (or subsistence) sector of developing countries, and third the study of the manpower needs of education: the demand and supply of teachers.

a) *Comparative International Data on High and Medium Manpower Needs in the Modern Sector of Developing Countries.* With the exception of certain Eastern European countries where there exists basic information about the norms for middle and high level manpower in all branches of activity, the data available for developing countries is scant. It is therefore difficult to make good estimates of future manpower needs even when there exist good projections of the economy.

Future manpower needs for each branch of activity vary according to numerous factors, all of which vary at differing levels of economic development: the structure of the active population, the relative availability of labor and capital, the wage structure, the level of technology and automation in each branch of activity, employment poli-

cies of government and private management, the availability of trained manpower, etc.

A major international study should be conducted on a sector per sector basis to determine the range of variations in the utilization of high and medium level manpower per unit of production in a large sample of countries at various levels of economic development.

The main objective of this study would be to provide a means of assessing the evolution of the norms for the employment of high and medium manpower as higher levels of economic development are reached and as new technologies are introduced. It would permit countries to situate present employment norms in the context of a large sample of countries. . . .

b) *A Study of Special High and Medium Manpower Needs for the Modernization of the Traditional Sector.* In most developing countries there exist two separate economies that literally co-exist side by side: a small modern sector and a large traditional subsistence sector. What are the special high and medium level manpower needs required to accelerate the economic and social transformation of the traditional sector?

What high and medium level skills are needed for community development, agricultural extension service, agricultural credit and land reform programs, industrial estate and small industries extension services, production and marketing cooperatives, family planning and public health programs and for other undertakings of this nature? On what basis can these needs be estimated? What are the minimum manpower norms required to make such activities effective? How can these needs be met? What are the most effective means and what new type institutions are needed to train high and medium level manpower for these services?

A study of the actual experience of selected countries where considerable work of this type has been successfully undertaken should be undertaken by a small interdisciplinary team of experts familiar with these development activities. A study tour of six or more such countries to gather necessary data and the analysis of these data should lead to a most important publication in this area where comprehensive generalized information is still lacking.

c) *A Study of the Demand and Supply of Teachers in Developing Countries.* Education's own manpower requirements can be a most difficult bottleneck during the rapid expansion of any education system. In developing countries the situation is greatly complicated as

good teachers are often the largest manpower pool from which other needs of a growing economy are supplied.

A basic study of the teaching profession in developing countries should examine the factors that affect the demand and supply of teachers.

How is the time of teachers utilized? How can teachers be utilized more effectively? What are the other factors that affect the demand and supply for teachers? What training requirements are imposed? At what age are teachers allowed to retire? How is the socio-economic status of teachers modified in a growing economy? Do teacher salaries tend to keep up with salaries in competing professional fields? What are the practical policy implications of trying to maintain an adequate supply of teachers when the manpower demands of other sectors of the economy become more acute? How fast must teachers' salaries increase relative to competing demands if an adequate supply of teachers is to be maintained? How can the evolution of such salaries be estimated?

This study should also examine what additional steps can be taken by governments to attract and keep good teachers to the teaching professions. What non-economic incentives have been given to teachers in different countries? What factors can make teaching more attractive? What types of career opportunities exist in different countries? What solutions seem best adapted to the special conditions of developing countries, particularly to the problems of finding and keeping teachers for the rural areas?

Lastly, the study should examine alternative means of preparing teachers, particularly when supply emergencies arise. What has been the experience and what conclusions can be reached about programs to upgrade, retrain, reemploy or accelerate the training of teachers in developing countries? What lead time do such programs require to be implemented? How effective are they and how much do they cost?

2. STUDIES ON THE DEMAND FOR EDUCATION

Two research avenues are promising: First, the development of methodologies to estimate the demand for education and second, research on methods to change this demand. The demand for education is the sum of individual wants for specific kinds of education. In most developing countries the demand for education is generally implicitly assumed: "If more schools were available they would be

filled." The problem of demand is usually expressed in terms of the supply of education. But in practice in each country there exists a pattern of demand for education with definite characteristics. Too often certain types of schools are built, staffed but not filled. It is not always wise to disregard this reality in the elaboration of plans. What methodologies can be used to assess this demand? How can it be affected?

a) *Methodologies for Estimating the Demand for Education in Developing Countries.* A series of pilot studies should be conducted in several developing countries to determine how the demand for education can effectively be assessed. These studies should result in a practical methodology for this purpose.

These studies would examine the various socio-economic factors that affect the demand for all levels of education. Which of these factors can be readily measured? What about the others? How can these measurements be made in practice? What type of statistics can be used? Similarly the studies would examine the principal characteristics of education which also affect this demand. Which of these characteristics can be readily measured and how can these measurable characteristics be taken into account (distance from schools, cost of education, length and timing of studies, admission procedures, etc.)?

The studies would also examine how sampling techniques might be used to assess the attitudes of parents and students from different social groups towards selected studies. For example, what are typical attitudes of different groups towards the selection of professional careers? How are these attitudes changing? What are attitudes in rural areas towards primary education? What type of education is wanted? ...

b) *Studies of the Means of Guiding the Demand for Education.* The demand for education reflects today's condition. Parents and students tend to demand the type of education which meets present economic and social opportunities. But economic and social development will change the characteristics of the society. New opportunities will arise which parents and students are not usually aware of, thus today's demand may not match future social needs and individual opportunities. An important and unique contribution of educational planning is to guide, ahead of time, the demand for education towards tomorrow's realities. The problem for research is how can this be done in practice?

Research on the uses of incentives including economic, financial,

social and psychological incentives to help reorient the demand for education is at best scant and recent. In fact there have been few if any comprehensive approaches to the use of incentives which can be studied. Incentives are used in isolated programs which in one way or another help direct the demand for education and the demand for the educated. Counselling services, the use of psychological tests to measure intelligence and ability for certain skills, campaigns to inform parents and students of new careers and opportunities, employment services and forecasting, the use of examinations and diplomas, financial encouragements to help with studies in certain fields and wage policies can all be considered component tools of a conscious policy of incentives to orient the demand for education.

A comprehensive experimental pilot project should be undertaken at least in one country to determine what are the problems and practical means of coordinating a government-wide effort to guide the demand of education towards specific future goals. Such a project should be undertaken in a developing country where there exists an important mismatch between specific estimated future manpower needs of the economy and the present demand and output of the education system. To make the problem more manageable, such a pilot project might be limited to the high and medium manpower needed for the development of the rural areas where the problem has most significance today.

Would reorienting educational capacity be a sufficient remedy? If new technical schools and new agricultural extension training schemes are established will these schools find students? If not, how can coordinated and comprehensive programs of incentives be designed to use all the tools which governments can actually use to orient and affect the demand for this type of education and training? What will be the cost of these incentives? What results can be achieved?

Such a pilot project would require time to get under way and results could not be expected overnight. But in three or four years' time important new ground could be broken.

3. STUDIES OF THE EDUCATION AND TRAINING REQUIREMENTS FOR HIGH AND MEDIUM LEVEL MANPOWER IN DEVELOPING COUNTRIES

Most developing countries have adopted the standards of the industrialized countries. Thus doctors, engineers and administrators are

usually trained according to similar standards in Europe and in Africa, Asia or Latin America. Do these standards make sense? In some fields they may be adequate, in others they may be too low or too high. Studies in developing countries of the desirable education and training requirements for key development activities should provide a better basis for answering this question.

C. Selected problems of content and technique

All problems of content and technique are the concern of educators. But certain of these problems are of particular interest to educational planners, usually because they have repercussions that go far beyond education. For example the problems of literacy, adult education and rural education have evident social and economic repercussions that concern planners. The same is true of many other problem areas such as the content of primary and secondary education, the content of vocational education, the modernization of higher education, the education of women, the use of mass media for education, the setting of national research and science policies, to mention a few examples.

In this report, three of these problem areas have been selected as initial priorities for intensified research. They are: education in the rural sector, vocational education and the use of modern educational technologies in developing countries.

1. STUDIES OF EDUCATIONAL PRIORITIES IN THE RURAL SECTOR

In most developing countries the gradual expansion of primary education in the rural areas seems to result principally in accelerating the exodus of the few educated from the impoverished countryside to the modern urban centers. In most countries educational planners confront difficult choices. What are the real priorities for education in the traditional rural areas? Should the major effort go into adult education? In literacy campaigns? In the rapid expansion of primary schools? Of what type of schools?

This is an area where much more experimentation must take place before any new answers can be expected. Basically there is still little knowledge about the potential role of education in the rapid modernization of traditional rural areas. The experience to date seems to reveal as many negative as positive effects. In theory, investments

in education in the rural areas should receive a first priority since economic development must depend on the modernization of these regions where the majority of the population lives. But in practice, the past education policies of the industrialized countries which consisted in expanding primary education to their rural areas does not seem to succeed as well today in the developing countries.

2. STUDIES OF THE ROLE OF VOCATIONAL EDUCATION IN DEVELOPING COUNTRIES

In developing countries there usually is an acute shortage of middle level skills. Well trained nurses, extension workers, technicians, foremen, clerks, executive assistants are nearly always in far more acute shortage than are doctors, engineers or lawyers, so that doctors often have to do the work of nurses or assistants, engineers the work of foremen and lawyers the work of clerks. At the same time there exists much confusion about the role of vocational education to train for middle level skills and this confusion does not make the tasks of the planners easier.

Training can be provided in vocational schools or can be provided on the job. Training can be provided together with general education over a longer period or it can be provided in accelerated form at the end of a general education course. Training for service in rural areas can be provided in urban centers or in rural areas.

A series of studies should be undertaken of the factors that can be taken into account by planners when deciding between different forms of training for medium level skills. Such studies should be preceded by a selection of the skills which are most needed in developing countries. One hundred medium level skills could be selected and grouped in manageable categories. A study for each of these categories would examine all the alternative means of training that are now used or could be used.

What is taught? When? How much do these alternative means of training cost? How effective are they? How long do they take? What are their implications to existing education structures? Each of these studies should analyse what are the factors that must be considered when selecting between alternative forms of training; to what extent can these different forms of training be substituted one for the other? To what extent are they complementary? How can combinations of these different forms of training be used most effectively and econom-

ically? What approaches would seem to make more sense in the selected developing countries?

These studies could be undertaken independently by small teams composed of economists and specialists having a broad vision of vocational education. Each study would provide a wealth of fresh information in a significant area where many new innovations are possible.

3. A STUDY OF THE ECONOMICS OF USING MODERN EDUCATIONAL TECHNOLOGY IN DEVELOPING COUNTRIES

Most thoughtful educators realize that the solution to the problems posed by the rapid quantitative and qualitative expansion of education systems in developing countries calls for radically novel approaches using, as much as possible, new educational technologies.

In the last years a considerable amount of research has taken place both in industrialized and in developing countries to create new technologies of education. For example the use of programmed learning, film, radio and television together with creative approaches to teaching the sciences have resulted in a wide array of unconventional pilot projects in education. But until now most of this research in developing countries has been oriented to creating new approaches and testing whether these new approaches actually work. The time has now come to find out what are the economics of these new approaches. How much do these approaches cost? How can they be combined and used economically in the context of the realities prevailing in developing countries? . . .

D. The cost and efficiency of education

Cost analysis is one of the principal instruments of educational planning. Cost analysis can be used for two principal purposes:

1. To estimate the future cost of education, and thus provide a basis to assess both the alternatives and the ability of a country to support the expansion of education.

2. To highlight apparent inefficiencies in the education system, to help determine how and where important cost savings can be achieved and to provide a cost basis for comparing alternative ways of meeting education or training needs.

1. AN INTRODUCTION TO EDUCATIONAL COST ANALYSIS IN DEVELOPING COUNTRIES

This report could serve as an introduction to educational cost analysis in developing countries. The report would briefly indicate the type of budgetary practices usually employed in education ministries of developing countries, it would introduce and explain the concepts of program budgeting, it would indicate the type of statistics and reporting needed for this purpose and provide a general guide as to how to go about reorganizing the cost accounting practices of an education ministry. This report should be written by qualified experts in the field, and it should be based on an analysis of existing practices in developing countries.

2. A STUDY OF EDUCATIONAL UNIT COSTS IN DEVELOPING COUNTRIES

There do not exist comparative cost data to permit planners or aid agencies to analyse how estimated costs of any expanding school system compares with costs in countries with similar economic and social conditions.

A study of the unit costs of education in a sample of developing countries should determine 1) the principal cost components of each part of the system together with an analysis of how these costs vary as educational systems expand and as GNP per capita rises; 2) to what extent do average costs of existing education systems seem to be lower or higher than "minimum effective" costs based on the cost of samples of well designed schools with adequate numbers of qualified teachers and with sufficient equipment, books, paper, pencils, etc.

Such a study should examine in each country the ratio of recurrent to development expenditures and the ratio of administrative to operating expenditures. It should analyse the principal cost components of these expenditures: teacher salaries, maintenance, books, paper, pencils, etc. and examine how future cost trends for these components can be estimated. Particular attention should be given to the cost component for school construction including how much is spent in local currencies and how much in foreign currencies. . . .

3. OPPORTUNITIES FOR COST SAVINGS IN THE EDUCATION SYSTEMS OF DEVELOPING COUNTRIES

A review of practical ways of achieving cost savings in education could provide useful guide lines to planners and administrators. Such

a study should review how significant cost savings were achieved in the education systems of both industrialized and developing countries. It should describe significant achievements in at least five principal areas: school construction and maintenance costs, equipment and textbooks costs, teacher costs, overhead costs and student wastage.

The study should analyse the different types of approaches that have been used to achieve cost savings (i.e. standardization, mass production, inter-country cost sharing for point projects, etc.) and generalize from the available evidence what are promising approaches in developing countries.

The study should pay attention to costs related to the utilization of teachers and students and it should pay special attention to the costs of student wastage and the costs of possible remedies. . . .

E. The financing and implementation of education plans

Education plans that do not get implemented have a limited utility. To go from paper to reality requires financing and institutions willing and able to implement the plan. Planners and policy makers often wish they had some kind of yardstick against which they could assess the level of financing they proposed to devote to education. Most planners and policy makers often express the desire to know about the experience of other countries in financing education along unconventional lines. All planners and policy makers wish they had readily available practical information about the actual experience of other countries that have set up educational planning institutions that produce plans both on paper and in reality. The following research could meet these needs.

1. A STUDY OF THE LIMITS FOR FINANCING EDUCATION IN DEVELOPING COUNTRIES

There always exists a practical limit beyond which any one country is not able to finance additional education expenditures. In each country this limit depends on the nature and composition of local, state, federal or national budgets, and on the extent education can be financed directly through voluntary contributions, fees, taxes and direct borrowings.

It would be useful to find out 1) whether it is possible to determine what this limit is in a sample of countries at different levels of devel-

opment and 2) whether these data could be used to establish an overall financing parameter for investments in education.

Such an instrument of analysis could be used readily with comparisons of the percentages of GNP going to education, to assess in very general terms where the education effort of any country stands in an international context.

This study would require an analysis of existing maximum percentages of government budgets for education and of the factors that allow such levels of effort. Similarly the study would have to analyse what maximum additional resources can be tapped for education in countries at different levels of development.

2. A STUDY OF UNCONVENTIONAL MEANS OF FINANCING EDUCATION

In many developing countries the largest share of education expenditures come from the national government budget. But government cannot provide much more to education and still provide for competing demands such as those of public health, communications, transportation power, justice and the military. What other means of financing can be created?

A study of the education financing experience of selected countries that have rapidly expanded their education system would shed light on unconventional approaches which have been tried and also suggest others that may not have been tried.

Such a study should briefly review the economic and social theory behind various approaches to the financing of education. It should examine and describe in detail how unconventional means of financing education were established. The study should review such programs as the organization of voluntary brigades for rural school construction, the financing of vocational education, the use of bond issues and the possibility of using "education banks" to channel savings for this purpose, the financing of higher education and the financing of the studies of promising students.

3. STUDIES OF THE ADMINISTRATION AND IMPLEMENTATION OF EDUCATION PLANS

A set of detailed studies of the administrative practices of countries with educational planning experience should provide valuable guide lines on how these countries have solved the following problems:

- a) The institutional framework for the formulation of the plan;

- i.e. participation of parent-teacher organizations, student organizations, administrators, the private education sector, the universities; links with overall and regional planning bodies, with other government agencies, with aid institutions, etc.
- b) The special mechanisms needed to insure that education plans pay sufficient attention to the need and results of educational innovation, research and development.
 - c) The result and analysis services needed for planning. Role of government services, universities and private institutions, role of aid agencies, foreign experts and research groups.
 - d) The institutional framework for the implementation of plans, indicative vs. imperative planning. The use of program budgets, the use of normal implementation administrations and "extraordinary" institutions.
 - e) Geographical aspects of planning, how is centralized planning coordinated with regional planning? The geographical breakdown of implementation responsibilities, etc. . . .

F. Foreign aid and educational planning

Educational planners are concerned in using foreign aid effectively. They therefore need to know how to benefit most from existing opportunities for sending students abroad, they need to know what different types of aid are available and what are the criteria of aid giving agencies. They need to know about the procedures of each aid agency, how projects are selected and how they should be submitted. In countries already obtaining considerable external aid, planners may be concerned with coordinating these aid efforts and insuring they are integrated in overall plans. Research on all these questions could be of practical utility.

1. A STUDY OF OPPORTUNITIES AND PROBLEMS OF THE INTERNATIONAL FLOW OF STUDENTS AND TRAINEES

A study of the opportunities and problems of sending students and trainees abroad should be conceived as an analysis of the flow of students and trainees from developing to more advanced countries and their utilization upon return, with the aim of identifying possible opportunities and ways to raise the productivity of this flow. Such a study should pay special attention to the following:

In which fields of specialization is the content of what is taught

in other countries relevant to the problems of developing countries?

In which fields of specialization is study abroad more economic than attempting to create local faculties to train people in developing countries? When are these economic conditions changed?

In which fields of specialization are employment opportunities very attractive abroad and is there danger that students will not return home?

Such a study should cover fifty to one hundred specializations of relevance to the developing countries including specializations in public health, medicine, science, engineering, agriculture, public administration and other social sciences. It should be based on 1) a careful examination of conditions in both the industrialized and in the developing countries, 2) the analysis of the pattern and composition of existing flows of students and trainees.

2. A STUDY OF CRITERIA AND PROCEDURES OF PROVIDING EXTERNAL AID FOR EDUCATION

A study should be undertaken of the criteria, the procedures and the nature of the different programs of the principal aid giving agencies working in education in developing countries.

The study should first describe each aid institution, its programs, its objectives, the rough order of magnitude of the financial resources at its disposition for education, the criteria and approaches followed in providing assistance to education, the countries where it operates and the detailed procedures it follows for providing aid.

On the basis of the information obtained, the study should also provide a manual describing the minimum information needed to submit an education project to aid agencies and how this type of information can usually be obtained.

3. A STUDY OF THE EXPERIENCE OF PROVIDING ASSISTANCE FOR EDUCATION PLANNING

In many countries, educational planning has been made possible or greatly assisted through the work of external agencies. This is true not only in Latin America, Asia and Africa but also in Europe. In the last years varied experiences of providing aid for educational planning have taken place. A study of these experiences in selected countries could provide a guide of the mistakes to avoid and of the valuable experiences that might be repeated elsewhere.

Such a study should seek to determine what type of international

assistance and cooperation is most effective for this purpose, what is the role of short term missions, of long term advisors. How effective are regional approaches and confrontations such as those undertaken in Europe? The study should also examine the problems that have arisen when several aid agencies have attempted to provide assistance for educational planning and development in the same country. How have the receiving governments handled these problems? How successful have been joint cooperative arrangements between aid agencies?

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chapter 17

Toward a Theory of Education for Development

In conclusion, it is well to ask: Where do we now stand in understanding and employing education as a means of development in the emerging nations? Certainly much has been learned. Although we have had to become chary about applying unreflectingly to emerging states educational programs or economic judgments on educational returns that are sound in developed lands, we have, nevertheless, through innovation and adaptation learned much about programs and techniques that are available and potentially effective for use. While we have become aware of dead ends to be avoided, we have become equally aware of the vast reservoir of ideas that may be tapped. Since the social and economic situations in emerging lands have been subject to careful assessment, we have learned not only to be skeptical of easy educational solutions or panaceas but also to be confident that education imaginatively conceived can play a critical role in the intricate process of development. If we have learned of the resistance and difficulties to be expected, we have also learned much about means of overcoming resistance and resolving difficulties. And certainly, we have come to see more clearly than before the need to relate education to the other disciplines if schools and schooling are to be developmental rather than antidevelopmental in impact.

Even while we have been learning much, we have, also, unfortunately lost many opportunities to learn. It is not easy in developing lands, where so much needs immediate attention, to carry on research and study even as one gives attention to

the practical problems of institutions and programs, but in the long run failure to carry on research and evaluation can only impede efforts to devise and build educational programs that are genuinely developmental. Moreover, when, for one reason or another we fail to admit our mistakes and weaknesses, or explain them away using as an alibi "the situation" ("the situation" is really the heart of the problem of underdevelopment), our store of knowledge is diminished accordingly. But often our failures here are more than failures of research as narrowly conceived; they are really failures arising from a lack of sound theoretical bases on which to proceed. Too often educational programs have been launched without careful attention to coordinating elements *within* education or *between* education and other facets of economic and social change. Too often educational schemes have been launched without clearcut delineation of their goals or without recognition or analysis of the assumptions upon which they rest. In short, we have thus far failed to pull together the strands of a theory. Too often neither foreign consultants nor educators in emerging lands know what they are really testing or trying out, except in the most general terms. Needless to say, none of these is an irremediable ill, and the promise of a brighter future in using education for development arises because we can foresee their remedy.

The evidence for such a happy prognosis is not only that we have learned much, but that our resources for continuing to learn are increasingly promising. Within many of the developing lands, there are growing cadres of trained educators who possess training that enables them to analyze their educational endeavors in relation to economic and social factors beyond the narrow context within "school walls." Within many of the developing lands there are also new institutions of higher learning that give promise not only of producing manpower for development but also of carrying on research and experimentation needed for progress. Perhaps in the short run even more important are the resources the advanced nations are now making available to analyze and synthesize what is being learned about the role of education in various sectors and stages of development. This story is told not only through the growing number of educators and other social scientists who have concerned themselves with this field but also through the organization

within universities and international bodies of specialized "knowledge centers" concerned with research and synthesis, and frequently serving to coordinate various approaches that have too long been disparate or non-communicating.

Perhaps the greatest cause for optimism lies, however, in the renewed recognition, both by social scientists and by leaders in new nations, that education plays an indispensable role in development, reinforcing what educators have long maintained but strengthening this claim by new methods of computation and analysis. Unfortunately those who unexpectedly find themselves in new privileged positions are neither prone to look to their own limitations nor to check the price the new position demands, and it is for this reason it might be well to suggest a few of the cautions educators and educational enthusiasts would do well to regard.

We would first of all be well advised to maintain an attitude of humility about what education can be reasonably expected to do. Overconfidence and overambition may in the long run deter both continuous educational growth and sound national development. It is well to remember that important though ideas and knowledge are, the formal educational system alone can never reshape societies in the modern image.

The very aspirations for modernity that make an increased tempo of change inevitable may also attach loyalties to western educational institutions and programs that are thought "modern" but that may be quite inappropriate in a given developmental context. Many who have worked in developing nations are aware of the antidevelopmental force of fixed notions of equivalence and imitation of western programs.

There is a built-in element of rigidity in the institution of the school. The personnel who staff the school frequently look to its past rather than to its future potential for their beacons, and concepts such as "standards" or "excellence" may with the best intentions be derived from outmoded or traditional patterns and only serve to retard needed modifications.

There are different cadences as well as different phases of development, and both phases and cadences may require unique emphases, balances, and priorities. "Breathing periods" may be very necessary in the educational race.

Educational development in the emerging nations always takes

place in an economy of scarcity and must itself economize. In many ways this has been made obvious, but there are less apparent elements of economizing that often go unrecognized. Genuine economizing involves not only the obvious avoidance of duplication, ill-considered starts, calculated limitation of expansion of facilities or enrollments at the primary, secondary, or university level, but equally important, it requires the overcoming of fixations that institutionalize irrelevance in educational content and methodology. Moreover, genuine economizing may involve curtailing budgets for schooling in favor of various forms of non-school or school-and-life education, within or outside of the province of education ministries.

We must guard against becoming exclusively the servants of disciplines that have suddenly discovered the relevance of education to their own particular and limited concerns and goals. Receptivity or openness to other, related disciplines and needs is one thing, but "educational theory" must be something more than a barren cove to be filled by each rising tide. Thus, although the concept of man as an economic input may be a useful intellectual tool, even a corrective for past thinking, it cannot be a replacement for all educational concepts and goals. Educators might well remark the words of an economist who recently concluded a study on the returns from education with a reminder that "there will always be an element which cannot be translated into either costs or revenues, but which nonetheless give education the full meaning by permitting one to appreciate as well a bird of Brancusi and a Tang poem, a quintet by Mozart and the song of the night watchmen in a Dahomean village."*

Good education always involves an orchestration of themes and motives; it is not just education but *good* education that is developmental. Finally, no education can be better than the conception of the good life that shapes and permeates it.

Perhaps it might not be unjust to state that we are at the present time standing on the threshold of evolving a more comprehensive theory, or theories, of the role of education in modernizing the underdeveloped lands. Although we are not so

* Le Thanh Khoi, "Le Rendement de l'Education," *Tiers-Monde*, V, No. 17 (1964), 138 (Translated from the French).

ambitious as to propose such a theory here, we might, nonetheless, do well to indicate in conclusion what the relevant considerations, which have been revealed by the selections and commentaries in this volume, would suggest that its characteristics must be. The need for better theory is pressing. It is no longer enough to say that education in the developing lands must be "suited to their needs" or "practical," catch words that have too often disguised the real need, that is, the need for careful thought and sound planning. Badly needed are educational programs based on the analysis and synthesis of our accumulated experience or on experimentation and imagination inspired by a reasonable and coherent theory. Whatever precise shape such a theory shall take, it must certainly meet the following requirements:

1. It must be built upon a concept of social and situational relevance. An educational theory built upon such a concept would not be satisfied by current vague exhortations to "bear in mind the social facts and aspirations," but it would require delineating in rigorous terms their programmatic implications.

2. It must clarify the concepts of *modernization* or *development* and the goals that they involve. Sound theories are clear theories, and goals must be clearly enough formulated and understood to produce consistent programs of action rather than mere diffuse activity.

3. It must provide for *selection* and *balance*. It must provide a basis not only for choosing between various programs of education but also of choosing between education and other sectors of the economy and between benefits to present and future generations. It must, in short, provide the grounds for establishing priorities in an economy of scarcity.

4. It must encompass what is known of the dynamics of change and reconstruction. The resistance to innovation and the persistence of inappropriate programs, both of which have been chronicled in this volume, will yield only to the best that is known about inducing change. A sound theory must further provide a basis for establishing administrative structure capable of initiating and supporting change.

5. It must allow for *continuity in change*. Change should be a continuous process, and when successive steps and reinforce-

ments are not provided for it, slippage generally occurs. However, if everything could be changed simultaneously, tragic dislocations and disorganization would follow. A sound theory will provide bases for choosing between strategic elements to be changed and stabilizing elements to be retained.

6. It must be *economic*, working within *de facto* limitations. It must establish economic criteria in the usual sense of the term—for maximum use of capital facilities, distribution of recurring revenue and the like. It must also establish criteria in a more sophisticated sense of the term—the “economics” of achieving varied ends through varied means in a single system.

7. It must identify and clarify the significant variables. Much initial theorizing and most research that has been done has employed such gross categories as “primary schools,” “take-off-stage economics,” or “rural education.” It is urged that the categories employed as variables should not disguise or conceal the most significant variables that may account for progress or frustration.

8. It must *not be confined* by rigid or outmoded distinctions and categories. A distinguished scholar recently commented that we must not confuse literacy training with education; for our purposes it may be even more important that we not equate education with schooling. Certainly the scope of an adequate theory will at least embrace hypotheses combining work-experience with school experience, weighing in-service training along with pre-service formation.

9. It must *avoid the pitfalls of simplicism*. It must be genuinely interdisciplinary in character; it must involve the coordination of educational change with other aspects of development; it must eschew reliance on stereotyped panaceas to treat complex ills.

10. It must be *amenable to research* and promote further study. It must suggest hypotheses that lead to feasible investigation, hypotheses that can be allowed or disallowed on the basis of evidence, and that are capable of further amplifying our knowledge or modifying theory.

11. It must *stimulate imagination and ingenuity*. Progress is based not on blind or routine repetition but on imaginative insights that a good theory should stimulate. Educational theories

that leave no room for ingenuity in the development of programs are unlikely to foster this quality in new generations.

12. It must be *democratic* in the sense of involving the competence and engaging the commitment of as wide a range of participants as possible. Good theory of education, like good theory of change, suggests appropriate areas for the devolution of authority to those most immediately and directly concerned.

In short, we believe we are now at a stage in which education for development can take its place as a normative science. It is ready to become theoretical in the healthy sense of the term: that is, ready to establish its values, to define its terms, to locate its significant variables and to propose, test, and modify its hypotheses and generalizations. Education to be truly developmental must be purposeful in the sense that consistent and testable theory can best make it purposeful. Time itself does not solve all problems, and programs of education or of educational assistance that are palliatives designed to allow time to heal ills may in fact merely allow educational and social sores to fester. Planned programs, based on sound theory, are a much surer medicine.

If this concern for theory appears remote from that small boy driving an ox around a Persian water wheel on the Punjab plain, who was introduced at the opening of this volume, it is only because appearances are misleading. Our concern with his welfare is not the less because our concern with theory is the more. Any educational theory worthy of respect is concerned centrally with him, and with countless numbers like him. And if we call attention to him, again, at the conclusion of this volume, it is to restate our underlying conviction that the ultimate vindication of any educational theory, of any education itself, lies in the richness and meaning it gives to the lives of those who receive it and, in our time in much of the world, to the lives of those less fortunate ones who must still profit indirectly from their brothers' experience. It is well for all engaged in education for development to remind themselves periodically that this is their vindication.

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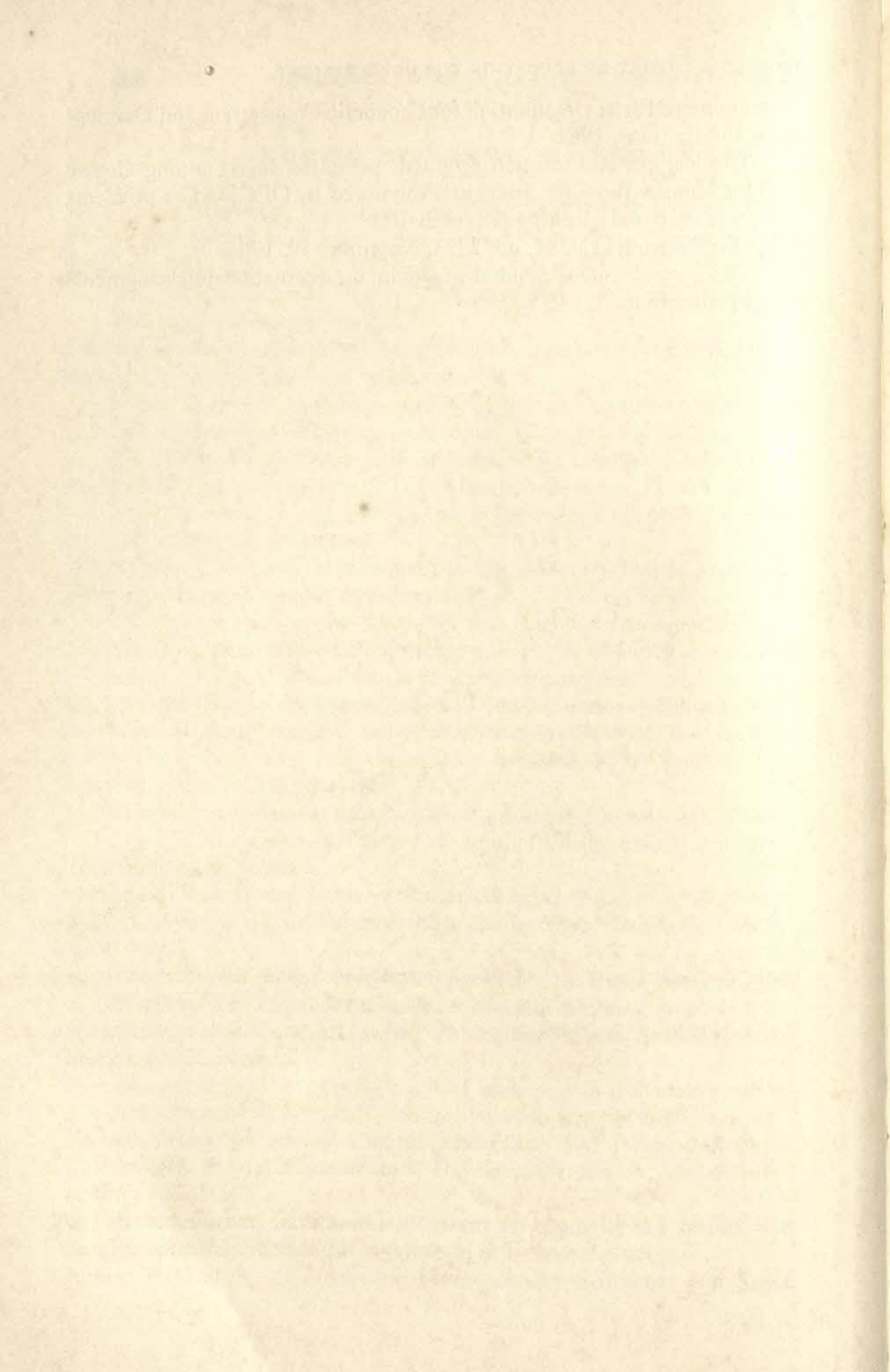
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appendix

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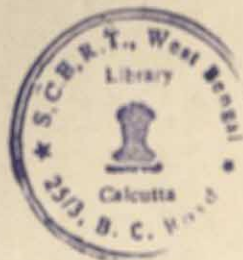
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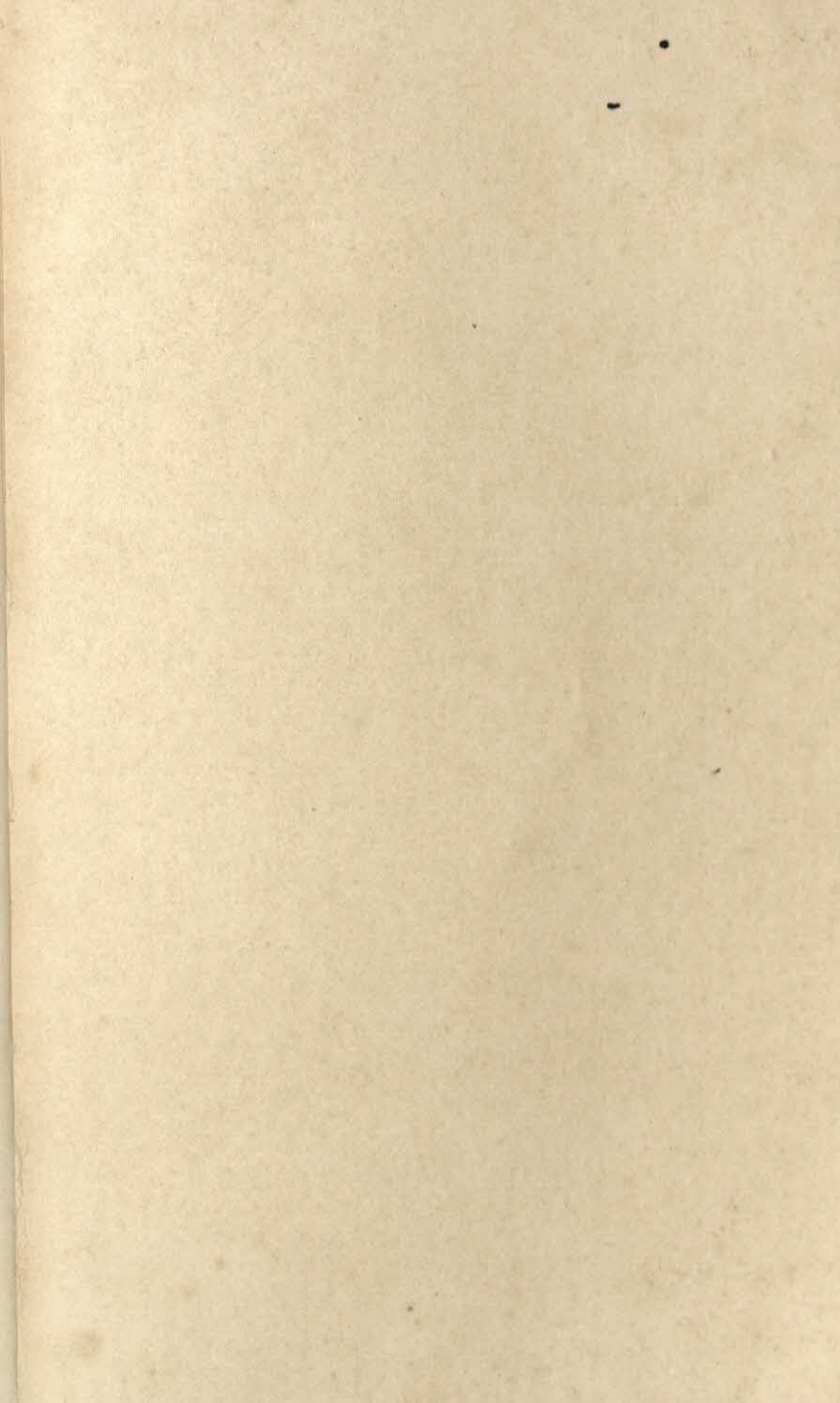
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